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HUMAN TRAITS
AND THEIR
SOCIAL SIGNIFICANCE

BY

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FOREWORD

This book was written, originally and primarily, for use in a course entitled "Introduction to Contemporary Civilization," required of all Freshmen in Columbia College. It is an attempt to give a bird's-eye view of the processes of human nature, from man's simple inborn impulses and needs to the most complete fulfillment of these in the deliberate activities of religion, art, science, and morals. It is hoped that the book may give to the student and general reader a knowledge of the fundamentals of human nature and a sense of the possibilities and limits these give to human enterprise.

Part I consists of an analysis of the types of behavior, a survey of individual traits and their significance in social life, a brief consideration of the nature and development of the self, individual differences, language and communication, racial and cultural continuity. Those fruits of psychological inquiry have been stressed which bear most strikingly on the relations of men in our present-day social and economic organization. In consequence, there has been a deliberate exclusion of purely technical or controversial material, however interesting. The psychological analysis is in general based upon the results of the objective inquiries into human behavior which have been so fruitfully conducted in the last twenty-five years by Thorndike and Woodworth. To the work of the first-mentioned, the author is particularly indebted.

Part II is a brief analysis, chiefly psychological in character, of the four great activities of the human mind and imagination — religion, art, science, and morals. These are discussed as normal though complex activities developed, through the process of reflection, in the fulfillment of man's inborn impulses and needs. Thus descriptively to treat these spiritual enterprises implies on the part of the author a naturalistic viewpoint whose main outlines have been fixed for this generation by James, Santayana, and Dewey. To the last-named the writer wishes to express the very special obligation that a pupil owes to a great teacher.

The book as a whole, so far as can be judged from the experience the author and others have had in using it during the past year as a text at Columbia, should fit well into any general course in social psychology. It has been increasingly realized that the student's understanding of contemporary problems of government and industry is immensely clarified by a knowledge of the human factors which they involve. This volume supplies a brief account of the essential facts of human behavior with especial emphasis on their social consequences. Part I may be independently used, as it has been with success, in a general course in social psychology. Part II, the "Career of Reason," presents material which many instructors find it highly desirable to use in introductory philosophy courses, but for which no elementary texts are available. The usual textbooks deal with the more metaphysical problems to the exclusion of religion, art, morals, and science, humanly the most interesting and significant of philosophical problems. Where, as in many colleges, the introductory philosophy course is preceded by a course in psychology, the arrangement of the volume should prove particularly well suited.

The illustrative material has been drawn, possibly to an unusual extent, from literature. The latter seems to give the student in the vivid reality of specific situations facts which the psychologist is condemned, from the necessities of scientific method, to discuss in the abstract.

The book follows more or less closely that part of the syllabus for the course in Contemporary Civilization, which is called "The World of Human Nature," which section of the outline was chiefly the joint product of collaboration by Professor John J. Coss and the author. To the former the author wishes to express his large indebtedness. Also to Miss Edith G. Taber, for her careful and valuable editing of the manuscript in preparation for the printer, he desires to convey his deep appreciation.

I. E.

Columbia University, June 1920.

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INTRODUCTION

Human traits and civilization. Throughout the long enterprise of civilization in which mankind have more or less consciously changed the world they found into one more in conformity with their desires, two factors have remained constant: (1) the physical order of the universe, which we commonly call Nature, and (2) the native biological equipment of man, commonly known as human nature. Both of these, we are almost unanimously assured by modern science, have remained essentially the same from the dawn of history to the present. They are the raw material out of which is built up the vast complex of government, industry, science, art — all that we call civilization. In a very genuine sense, there is nothing new under the sun. Matter and men remain the same.

But while this fundamental material is constant, it may be given various forms; and both Nature itself and the nature of man may, with increasing knowledge, be increasingly controlled in man's own interests. The railroad, the wireless, and the aeroplane are striking and familiar testimonies to the efficacy of man's informed mastery of the world into which he is born. In the field of physical science, man has, in the short period of three centuries since Francis Bacon sounded the trumpet call to the study of Nature and Newton discovered the laws of motion, magnificently attained and appreciated the power to know exactly what the facts of Nature are, what consequences follow from them, and how they may be applied to enlarge the boundaries of the "empire of man."

In his control of human nature, which is in its outlines as fixed and constant as the laws that govern the movements of the stars, man has been much less conscious and deliberate, and more frequently moved by passion and ignorance than by reason and knowledge. Nevertheless, custom and law,

the court, the school, and the market have similarly been man's ways of utilizing the original equipment of impulse and desire which Nature has given him. It is hard to believe, but as certain as it is incredible, that the modern professional and business man, moving freely amid the diverse contacts and complexities pictured in any casual newspaper, in a world of factories and parliaments and aeroplanes, is by nature no different from the superstitious savage hunting precarious food, living in caves, and finding every stranger an enemy. The difference between the civilization of an American city and that of the barbarian tribes of Western Europe thousands of years ago is an accurate index of the extent to which man has succeeded in redirecting and controlling that fundamental human nature which has in its essential structure remained the same through history.

Man's ways of association and coöperation, for the most part, have not been deliberately developed, since men lived and had to live together long before a science of human relations could have been dreamed of. Only to-day are we beginning to have an inkling of the fundamental facts of human nature. But it has become increasingly plain that progress depends not merely on increasing our knowledge and application of the laws which govern man's physical environment. Machinery, factories, and automatic reapers are, after all, only instruments for man's welfare. If man is ever to attain the happiness and rationality of which philosophers and reformers have continually been dreaming, there must also be an understanding of the laws which govern man himself, laws quite as constant as those of physics and chemistry.

Education and political organization, the college and the legislature, however remote they may seem from the random impulses to cry and clutch at random objects with which a baby comes into the world, must start from just such materials as these. The same impulse which prompts a five-year-old to put blocks into a symmetrical arrangement is the stuff out of which architects or great executives are made. Pa-

triotism and public spirit find their roots back in the same unlearned impulses which make a baby smile back when smiled at, and makes it, when a little older, cry if left too long alone or in a strange place. All the native biological impulses, which are almost literally our birthright, may, when understood, be modified through education, public opinion, and law, and directed in the interests of human ideals.

It is the aim of this book to indicate some of these more outstanding human traits, and the factors which must be taken into account if they are to be controlled in the interests of human welfare. It is too often forgotten that the problems which are to be dealt with in the world of politics, of business, of law, and education, are much complicated by the fact that human beings are so constituted that given certain situations, they will do certain things in certain inevitable ways. These problems are much clarified by knowing what these fundamental ways of men are.

HUMAN TRAITS AND THEIR SOCIAL SIGNIFICANCE

PART I

CHAPTER I

TYPES OF HUMAN BEHAVIOR

The human animal. Any attempt to understand what the nature of man is, apart from its training and education during the life of the individual, must start with the realization that man is a human animal. As a human being he is strikingly set off by his upright posture and his large and flexible hand. But chiefly he is distinguished by his plastic brain, upon which depends his capacity to perform the complex mental activities — from administering a railroad to solving problems in calculus — which constitute man's outstanding and exclusive characteristic.[1]

But in his structure and functions man bears, as is now well known, a marked resemblance to the lower animals. His respiratory and digestive organs, for example, may be duplicated as far down in the animal scale as birds and chickens.[2] Man's whole physical apparatus and mode of life, save in complexity and refinement of operations, are the same as those of any of the higher mammals. But more important for the student of human behavior, man's mental life — that is, his way of responding to and dealing with his environment — is in large part identical with that of the lower animals, especially of the most highly developed vertebrates, such as the monkey. They have, up to a certain point, precisely the

[1] The thinking process is discussed in detail in chapters III and XIV.

[2] With certain modifications accounted for in their historical "descent" with modification from a common ancestor. See Scott: *Theory of Evolution.*

same equipment for adjusting themselves to the conditions of life. Apart from education, both man and animal are endowed with a set of more or less fixed tendencies to respond in specific ways to specific stimuli. These inborn or congenital tendencies are generally known as reflexes or instincts.[1] These are unlearned ways, exhibited by both human and animal organisms, of responding promptly and precisely, and in a comparatively changeless manner to a given stimulus from the environment. These tendencies to act, while they may be, and most frequently are of advantage to the organism, are not conscious or acquired. They are irresistible impulses to do just such-and-such particular things in such-and-such particular ways when confronted with just such-and-such particular situations. In the well-known words of James:

> The cat runs after the mouse, runs or shows fight before the dog, avoids falling from walls and trees, shuns fire and water, etc., not because he has any notion either of life or death, or of self-preservation. He has probably attained to no one of these conceptions in such a way as to react definitely upon it. He acts in each case separately, and simply because he cannot help it; being so framed that when that particular running thing called a mouse appears in his field of vision he *must* pursue; that when that particular barking and obstreperous thing called a dog appears there he *must* retire, if at a distance, and scratch if close by; that he *must* withdraw his feet from water, and his face from flame.[2]

Similarly, the baby's reaching for random objects, and sucking them when seized, its turning its head aside, when it has had enough food, its crying when alone and hungry, are not, for the most part, deliberate methods invented by the infant to maintain its own welfare, but are almost as automatic as the number of sounds omitted by the cuckoo clock at midnight.

[1] The difference between the two is largely one of complexity. By a reflex is meant a very simple and comparatively rigid response; by an instinct a series of reflexes such that when the first is set off, the remainder are set off in a regularly determinate succession.

[2] James: *Psychology*, vol. II, p. 384.

Why do men always lie down, when they can, on soft beds rather than on hard floors? Why do they sit round the stove on a cold day? . . . Why does the maiden interest the youth so that everything about her seems more important and significant than anything else in the world? Nothing more can be said than that these are human ways, and that every creature *likes* its own ways, and takes to the following of them as a matter of course. . . . Not one man in a billion, when taking his dinner, thinks of utility. He eats because the food tastes good, and makes him want more. If you ask him *why* he should want to eat more of what tastes like that, instead of revering you as a philosopher, he will probably laugh at you for a fool.[1]

These inborn tendencies to act vary in complexity from the withdrawing of a hand from a hot stove or the jerking of the knee when touched in a particular spot to startlingly involved trains of action to be found in the behavior of certain of the lower animals. Bergson cites the case of a species of wasp which with a skill, unconscious though it be, resembling that of the expert surgeon, paralyzes a caterpillar without killing it, and carries it home for food for its young.[2] There are again many cases of "insects which invariably lay their eggs in the only places where the grubs, when hatched, will find the food they need and can eat, or where the larvæ will be able to attach themselves as parasites to some host in a way that is necessary to their survival." [3] In many instances these complicated trains of action are performed by the animal in a situation absolutely strange to it, without its ever having seen the act performed before, having been born frequently after its parents had died, and itself destined to die long before its grubs will have hatched.

The number and variety of man's instincts. Various attempts have been made, notably by such men as James, McDougall, and Thorndike, to enumerate and classify the tendencies with which man is at birth endowed, or which,

[1] James: *Psychology*, vol. II, p. 386.
[2] Bergson: *Creative Evolution*, p. 172.
[3] McDougall: *Social Psychology*, p. 24. (Except where otherwise noted, all references are to the fourth edition.)

like the sex instinct, make their appearance at a certain stage in biological growth, regardless of the particular training to which the individual has been subjected. Earlier classifications were inclined to speak of instincts as very general and as half consciously purposeful in character. Thus it is still popularly customary to speak of the "instinct of self-preservation," the "instinct of hunger," and the "parental instinct." The tendency of present-day psychology is to note just what responses take place in given specific situations. As a result of such observation, particularly by such biologists as Watson and Jennings,[1] instincts have come to be regarded not as general and purposive but as specific and automatic. Thus it is no instinct of self-preservation that drives the child to blink its eyes at a blinding flash of light; it is solely and simply the very direct and immediate tendency to blink its eyes in just that way whenever such a phenomenon occurs. It is no deliberate intent to inhale the oxygen necessary to the sustenance of life that causes us to breathe. No more is it a conscious plan to provide the organism with nourishment that prompts us to eat our breakfast in the morning; it is simply the immediate and irresistible enticement of food after a night's fast. Not a deliberate motive of maternity prompts the mother to caress and care for her baby, but an inevitable and almost invincible tendency to "cuddle it when it cries, smile when it smiles, fondle it and coo to it in turn."

In the last few years, as a result of the observation of animals under laboratory conditions, there has been increasing evidence of a large number of specific tendencies to act in specific ways, in response to specific given stimuli. As no stimuli are ever quite alike, and no animal organism is ever in exactly the same physico-chemical condition at two different times, there are slight but negligible differences in response. Allowing for these, animals may be said to be equipped with a wide variety of tendencies to do precisely the same things under recurrent identical circumstances. The aim of the

[1] Watson: *Behavior*. H. S. Jennings: *Behavior of the Lower Organisms*.

experimental psychologist is to discover just what actions occur when an animal is placed in any given circumstances, precisely as the chemist notes what reaction occurs when two chemicals are combined.

While experiments with the human infant are more difficult and rare (and while it is among infants alone among humans that original tendencies can be observed free from the modifications to which they are so soon subjected by training and environment) careful observers find in the human animal also a great number of these specific ways of acting. Just which of the large number of observed universal modes of behavior are original and unlearned, is a matter still in controversy among psychologists. There is practically complete agreement among them, however, with respect to such comparatively simple acts as grasping, reaching, putting things in the mouth, creeping, standing and walking, and the making of sounds more or less articulate. Most psychologists recognize even such highly complicated tendencies as man's restlessness in the absence of other people, his tendency to attract their attention when present, to be at once pitying and pugnacious, greedy and sympathetic, to take and to follow a lead.

In general, it may be said that man possesses not fewer instincts than animals, but more. His superiority consists in the fact that he has at once more tendencies to respond, and that in him these tendencies are more flexible and more susceptible of modification than those of animals. A chicken has at the start the advantage over the human; it can at first do more things and do them better. But it is the human baby who, though it cannot find food for itself at the start, can eventually be taught to distinguish between the nutritive values of food, secure food from remote sources, and make palatable food from materials which when raw are inedible.

An inventory and classification of man's original tendencies is made more difficult precisely because these are so easily modifiable and are, even in earliest childhood, seldom seen in their original and simple form.

At any given time a human being is being acted upon by a wide variety of competing and contemporaneous stimuli. In walking down a street with a friend, for example, one may be attracted by the array of bright colors, of flowers, jewelry and clothing in the shop windows, blink one's eyes in the glare of the sun, feel a satisfaction in the presence of other people and a loneliness for a particular friend, dodge before a passing automobile, be envious of its occupant, and smile benevolently at a passing child. It would be difficult in so complex and so characteristically familiar a situation to pick out completely and precisely the original human tendencies at work, and trace out all the modifications to which they have been subjected in the course of individual experience. For even single responses in the adult are not the same in quality or scope as they were to start with. Even the simplest stimuli of taste and of sound are different to the adult from what they are to the child. What for the adult is a printed page full of significance is for the baby a blur, or at most chaotic black marks on white paper.

But while it is difficult to disentangle out of even a simple, everyday occurrence the original unlearned human impulses at work, experimentation on both humans and animals seems clearly to establish that "in the same organism the same situation will always produce the same response." It also seems clear that in man these native unlearned responses to given stimuli are unusually numerous and unusually controllable. Upon the possibility of the ready modification of these original elements in man's behavior his whole education and social life depend.

Learning in animals and men. Men and animals are alike not only in that they have in common a large number of tendencies to respond in definite ways to definite stimuli, but that these responses may be modified, some strengthened through use, and others weakened or altogether discarded through disuse. In both also the survival and strengthening of some native tendencies, the weakening and even the complete

elimination of others, depends primarily upon the satisfaction which flows from their practice.

It must be remembered that any situation, while it calls forth on the part of the organism a characteristic response, may also call out others, especially if the first response made fails to secure satisfaction, or if it places the animal in a positively annoying situation. There are certain situations — being fed when hungry, resting when weary, etc. — which are immediate and original satisfiers; there are others such as bitter tastes, being looked at with scorn by others, etc., which are natural annoyers. The first type the animal will try various means of attaining; the second, various means of avoiding. Through "trial and error," through going through every response it can make to a given situation, the animal or human hits upon some response which will secure for it satisfaction or rid it of a positive annoyance. Once this successful response is hit upon, it tends to be retained and becomes habitual in that situation, while other random responses are eliminated.

As will be pointed out in the following, man has developed in the process of reflection a much more effective and subtle mode of attaining desirable results, but a large part of human acquisition of skill, whether at the typewriter, the piano, the tennis court, or in dealing with other people, is still a matter of making every random response that the situation provokes until the appropriate and effective one is hit upon, and making this latter response more immediately upon repeated experiences in the same situation. Once this effective response becomes habitual it is just as automatic in character as if it had been made immediately the first time, and it is almost impossible without knowledge of the animal's or the human's earlier modes of response to detect the difference between an acquired response and one that is inborn.

This process of trial and error is perhaps best illustrated in the behavior of the lower animals where careful experiments have been conducted for the purpose of tracing the process of learning. In the classic cases reported by Thorndike and

Watson, when chickens, rats, and cats were placed in situations where the first response failed to bring satisfaction, their behavior was in each case marked by the following features. At the first trial the animals in every case performed a wide variety of acts useless to secure the satisfaction they were instinctively seeking, whether it was food in a box, or freedom from confinement in a cage. Upon repeated trials the act appropriate to securing satisfaction was performed with increasing elimination of useless acts, and consequent decrease of the time required to perform the act requisite to secure food, or freedom, or both, as the case might be. One of Thorndike's famous cat experiments is best told in his own report:

> If we take a box twenty by fifteen by twelve inches, replace its cover and front side by bars an inch apart, and make in this front side a door arranged so as to fall open when a wooden button inside is turned from a vertical to a horizontal position, we shall have means to observe such [learning by trial and error]. A kitten, three to six months old, if put in this box when hungry, a bit of fish being left outside, reacts as follows: It tries to squeeze through between the bars, claws at the bars, and at loose things in and out of the box, stretches its paws out between the bars, and bites at its confining walls. Some one of all these promiscuous clawings, squeezings, and bitings turns round the wooden button, and the kitten gains freedom and food. By repeating the experience again and again the animal gradually comes to omit all the useless clawings, and the like, and to manifest only the particular impulse (*e.g.*, to claw hard at the top of the button with the paw or to push against one side of it with the nose) which has resulted successfully. It turns the button around without delay whenever put in the box. It has formed an association between the situation *confined in a box with a certain appearance* and the response of *clawing at a certain part of that box in a certain definite way*. Popularly speaking, it has learned to open a door by pressing a button. To the uninitiated observer the behavior of the six kittens that thus freed themselves from such a box would seem wonderful and quite unlike their ordinary accomplishments of finding their way to their food or beds. . . . A certain situation arouses, by virtue of accident or more often instinctive equipment, certain responses. One of these happens to be an act appropriate to secure freedom. It is stamped in in connection with that situation.[1]

[1] Thorndike: *Educational Psychology*, Briefer Course, p. 129.

Perhaps the most significant factor to be noted in this, and in similar cases, is that the successful response to a baffling situation is acquired, and that this acquisition remains a more or less permanent possession of the human or animal organism. Particularly important for the problem and practice of education is the mechanism by which these learned modes of behavior are acquired. For, to attain skill, knowledge, intellect, character, is to attain certain determinate habits of action, certain recurrent and stable ways of responding to a situation. The reason why the cat in the box ceased to perform the hundred and one random acts of clawing and biting, and after a number of trials got down to the immediately necessary business of turning the button was because it had learned that one thing only, out of the multitude of things it could do, would enable it to get out of the box and get its food. To say that it learned this is not to say that it consciously realized it; it means simply that when placed in such a situation again after having been placed in it a sufficient number of times, it will be set off to the turning of the button which gets it food, instead of biting bars and clawing at random — actions which merely serve further to frustrate its hunger. The animal has not consciously learned, but its nervous system has been mechanically directed.

A large part of the education of humans as well as of animals consists precisely in the modification of our original responses to situations by a trial-and-error discovery of ways of attaining satisfactory and avoiding annoying situations. Both animals and humans, when they have several times performed a certain act that brings satisfaction, tend, on the recurrence of a similar situation, to repeat that action immediately and to eliminate with successive repetitions almost all the other responses which are possible, but which are ineffective in the attainment of some specific satisfaction. The whole training imposed by civilization on the individual is based ultimately on this fundamental fact that human beings can be taught to modify their behavior, to change their origi-

nal response to a situation in the light of the consequences that follow it. This means that while man's nature remains on the whole constant, its operations may be indefinitely varied by the results which follow the operation of any given instinct. The child has its original tendency to reach toward bright objects checked by the experience of putting its hand in the flame. Later his tendency to take all the food within reach may be checked by the looks of scorn which follow that manifestation of man's original greed, or the punishment and privation which are correlated with it. Through experience with punishment and reward, humans may be taught to do precisely the opposite of what would have been their original impulse in any given situation, just as the monkey reported by one experimenter may be taught to go to the top of his cage whenever a banana has been placed at the bottom.

The prolonged period of infancy. Probably the most significant and unique fact of human behavior is the period of "prolonged infancy" which is characteristic of human beings alone. Fiske and Butler in particular have stressed the importance of this human trait. In the lower animals the period of infancy — that is, the period during which the young are dependent upon their parents for food, care, and training — is very short, extending even in the highest form of ape to not more than three months. This would appear, at first blush, to be a great advantage possessed by the lower animals. They come into the world equipped with a variety of tendencies to act which, within a week, or, as in the case of chickens, almost immediately after birth, are perfectly adapted to secure for them food, shelter, and protection. They are mechanisms from the beginning perfectly adjusted to their environment.

The human infant, while it is born with a greater number of instinctive activities than other animals, is able to make little use of them just as they stand. For years after birth it is helplessly dependent on others to supply its most elementary needs. It must be fed, carried, and sheltered; it cannot by

itself even reach for an object, and it cannot for nearly two years after birth specifically communicate its wants to other people. But this comparatively long helplessness of the human infant is perhaps the chief source of human progress.

The human baby, because it can do so little at the start, because it has so many tendencies to act and has them all so plastic, undeveloped, and modifiable, has to a unique degree the capacity to learn. This means that it can profit by the experience of others and adjust itself to a great variety and complexity of situations. The chicken or the bird can do a limited number of things perfectly, but it is as if it had a number of special keys opening special locks. The power of modifying these instinctive adjustments, the capacity of learning, is like being put in possession of a pass-key. As Professor Dewey puts it, "An original specialized power of adjustment secures immediate efficiency, but, like a railway ticket, it is good for one route only. A being who, in order to use his eyes, ears, hands, and legs, has to experiment in making varied combinations of their reactions, achieves a control that is flexible and varied." [1]

The more complex the environment is in which the individual must live, the longer is the period of infancy needed in which the necessary habits and capacities may be acquired. In the human being the period of infancy extends in a literal sense through the first five years of the individual's life. But in civilized societies it extends factually much longer. By the end of the first five years the child's physical infancy is over. It can take care of itself so far as actually feeding itself, moving about, and communicating with others is concerned. But so complex are the habits to which it must become accustomed in our civilization that it is dependent for a much longer period. The whole duration of the child's education is a prolongation of the period of infancy. In most civilized countries, until at least the age of twelve, the child is literally dependent on its parents. And with every advance in civili-

[1] Dewey: *Democracy and Education*, p. 53.

zation has come a lengthening in the period of education, or learning.

Intellectually, the period of infancy might be said not really to be over before the age of twenty-five, by which time habits of mind have become fairly well fixed. The brain and the nervous system remain fairly plastic up to that time, and if inquiry and learning have themselves become habitual, plasticity may last even longer. In the cases of the greatest intellects, of a Darwin, or a Newton, one might almost say the period of infancy lasts to old age. To be still learning at sixty is to be still a child in the best sense of the word. It is still to be open rather than rigid, still to be profiting by experience.

The great social advantages of the prolonged period of infancy lie in the fact that there is a unique opportunity both for the acquisition by individuals and for the imposition on the part of society of a large number of habits of great social value. The human being, born into a world where there are many things to be learned both of natural law and human relations, is, as it were, fortunately born ignorant. He has instincts which are pliable enough to be modified into habits, and in consequence socially useful habits can be deliberately inculcated in the immature members of a society by their elders. The whole process of education is a utilization of man's prolonged period of infancy, for the deliberate acquisition of habits. This is all the more important since only by such habit formation during the long period of human infancy can the achievements of civilization be handed down from generation to generation. Art, science, industrial methods, social customs, these are not inherited by the individual as are the instincts of sex, pugnacity, etc. They are preserved only because they can be taught as habits to those beings who come into the world with a plastic equipment of instincts which lend themselves for a long time to modification.

Consciousness of self and reaction to ideas. A significant difference between the actions of human beings and those of

animals is that human beings are conscious of themselves as agents. They may be said not only to be the only creatures who know what they are doing, but the only ones who realize their individuality in doing it. Dogs and cats are not, so far as we can draw inferences from extended observation of even their most complex actions, conscious of themselves. It is not very long, however, before the human animal begins to set itself off against the remainder of the universe, to discover that it is something different from the chairs, tables, and surrounding people and faces that at first constitute for it only a "blooming, buzzing confusion." A human being performs actions with a feeling of awareness; he is conscious of himself. This consciousness of self (see chapters VII and VIII) becomes more acute as the individual grows older. It has consequences of the gravest character in social, political, and eocnomic life. It is a large factor at once in such different qualities of character as ambition, friendship, humility, and self-sacrifice, and is responsible in large measure for whatever truth there is in the familiarly spoken-of conflict between "the individual and society."

Human beings are, furthermore, susceptible to a unique stimulation to action, namely, ideas. Animals respond to things only, that is, to things in gross:

> It may be questioned whether a dog *sees* a rainbow any more than he apprehends the political constitution of the country in which he lives. The same principle applies to the kennel in which he sleeps and the meat that he eats. When he is sleepy, he goes to the kennel; when he is hungry, he is excited by the smell and color of meat; beyond this, in what sense does he see an *object?* Certainly he does not see a house — *i.e.*, a thing with all the properties and relations of a permanent residence, *unless* he is capable of making what is present a uniform sign of what is absent — unless he is capable of thought.[1]

Human beings can respond to objects as *signs* of other things, and, what is perhaps more important, can abstract from those gross total objects certain qualities, features, ele-

[1] Dewey: *How We Think*, p. 17.

ments, which are universally associated with certain consequences. They can respond to the meaning or bearing of an object; they can respond to ideas.

To respond to ideas means to respond to significant similarities in objects and also to significant differences. It means to note certain qualities that objects have in common, and to classify these common qualities and their consequences in the behavior of objects. To note similarities and differences in the behavior of objects is to enable individuals to act in the light of the future. The printing on this page would be to a dog or to a baby merely a blur. To the reader the black imprints are signs or symbols. To the animal a red lantern is a haze of light; to a locomotive engineer it is a sign to halt. To respond to ideas is thus to act in the light of a future. It makes possible acting in the light of the consequences that can be foreseen. Present objects or features of objects are responded to as signs of future or absent opportunities or dangers. Every time we read a letter, or act in response to something somebody has told us, we are responding not to physical stimuli as such, but to those stimuli as signs of other things.

Human beings alone possess language. The value of the period of infancy in the acquisition of habits and the unique ability of human beings to respond to ideas is inseparably connected with the fact that man alone possesses a language, both oral and written. That is to say, men alone have an instrument whereby to communicate to each other feelings, attitudes, ideas, information. To a very limited degree, of course, animals have vocal and gesture habits; specific cries of hunger, of sex desire, or distress. But they cannot, with their limited number of vocal mechanisms, possibly develop language habits, develop a system of sounds associated with definite actions and capable of controlling actions. Only human beings can produce even the simplest system of written symbols, by which visual stimuli become symbols of actions, objects, emotions, or ideas. Biologists — in particular the ex-

perimentalist, Watson — find, in the capacity for language, man's most important distinction from the brute.

Language may be said, in fact, to be the most indispensable instrument of civilization. It is the means whereby the whole life of the past has been handed to us in the present. It is the means whereby we in turn record, preserve, and transmit our science, our industrial methods, our laws, our customs. If human relations were possible at all without a language, they would have to begin anew, without any cultural inheritance, in each generation. Education, the transmitter of the achievements of the mature generation to the one maturing, is dependent on this unique human capacity to make seen marks and heard sounds stand for other things. The extent to which civilization may advance is contingent upon the development of adequate language habits. And human beings have perfected a language sufficiently complicated to communicate in precise and permanent form their discoveries of the complex relations between things and between men.

Man the only maker and user of tools. One of the most important ways in which man is distinguished from the lower animals is in his manufacture and use of tools. So far as we know the ability to manufacture and understand the use of tools is possessed by man alone. "Monkeys may be taught a few simple operations with tools, such as cracking nuts with a stone, but usually they merely mimic a man."[1] Man's uniqueness as the exclusive maker and user of tools is made possible by two things. The first is his hand, which with its four fingers and a thumb, as contrasted with the monkey's five fingers, enables him to pick up objects. The second is his capacity for reflection, presently to be discussed, which enables him to foresee the consequences of the things he does.

The use of tools of increasing refinement and complexity is the chief method by which man has progressed from the life of the cave man to the complicated industrial civilization of to-day. Bergson writes in this connection:

[1] Mills: *The Realities of Modern Science*, p. 1.

As regards human intelligence, it has not been sufficiently noted that mechanical invention has been from the first its essential feature, that even to-day our social life gravitates around the manufacture and use of artificial instruments, that the inventions which strew the road of progress have also traced its direction. This we hardly realize, because it takes us longer to change ourselves than to change our tools. Our individual and even social habits survive a good while the circumstances for which they were made, so that the ultimate effects of an invention are not observed until its novelty is already out of sight. A century has elapsed since the invention of the steam engine, and we are only just beginning to feel the depths of the shock it gave us. But the revolution it has effected in industry has nevertheless upset human relations altogether. New ideas are arising, new feelings are on the way to flower. In thousands of years, when, seen from the distance, only the broad lines of the present age will still be visible, our wars and our revolutions will count for little, even supposing they are remembered at all; but the steam engine and the procession of inventions that accompanied it, will perhaps be spoken of as we speak of the bronze or of the chipped stone of prehistoric times: it will serve to define an age. If we could rid ourselves of all pride, if, to define our species, we kept strictly to what the historic and the prehistoric periods show us to be the constant characteristic of man and of intelligence, we should not say *Homo sapiens*, but *Homo faber*.[1]

Man's intelligence, it has so often been said, enables him to control Nature, but his intelligence in the control of natural resources is dependent for effectiveness on adequate material instruments. One may subscribe, though with qualification, to Bergson's further statement, that "intelligence, considered in what seems to be its original feature, is the faculty of manufacturing artificial objects, especially tools to make tools, and of indefinitely varying the manufacture."

Anthropologists distinguish the prehistoric epochs, by such terms as the Stone, Copper or Bronze, and Iron Ages, meaning thereby to indicate what progress man had made in the utilization of the natural resources about him. We date the remote periods of mankind chiefly by the mementos we have of the kinds of tools they used and the methods they had

[1] Bergson: *Creative Evolution*, pp. 138–39.

developed in the control of their environment. The knowledge of how to start and maintain a fire has been set down as the practical beginning of civilization. Certainly next in importance was the invention of the simplest tools. There came in succession, though æons apart, the use of chipped stone implements, bronze or copper instruments, and instruments made of iron. In the ancient world we find the invention of such simple machines as the pulley, the use of rope, and the inclined plane.

Without tracing the history of invention, it will suffice for our purpose to point out that agriculture and industry, men's modes of exploiting Nature, are dependent intimately on the effectiveness of the tools at their disposal. It is a far cry from the flint hatchet to the McCormick reaper and the modern steel works, but these are two ends of the same process, that process which distinguishes man from all other animals, and makes human civilization possible: that is, the use and the manufacture of tools.

CHAPTER II

TYPES OF HUMAN BEHAVIOR AND THEIR SOCIAL SIGNIFICANCE — INSTINCT, HABIT, AND EMOTION

Instinctive behavior. We have already noted the fact that both men and animals are equipped with a wide variety of unlearned responses to given stimuli. In the case of human beings, this original equipment varies from such a specific reaction as pulling away the hand when it is pinched or burned, to such general innate tendencies as those of herding or playing with other people. In a later stage of this discussion we shall examine the more important of these primary modes of behavior. At this point our chief concern is with certain general considerations that apply to them all.

The equipment of instincts with which a human being is at birth endowed must be considered in two ways. It consists, in the first place, of definite and unlearned mechanisms of behavior, fixed original responses to given stimuli. These are, at the same time, the original driving forces of action. An instinct is at once an unlearned mechanism for making a response and an unlearned tendency to make it. That is, given certain situations, human beings do not simply utilize inborn reactions, but exhibit inborn drives or desires to make those reactions. There is thus an identity in man's native endowment between what he can do and what he wants to do. Instincts must thus be regarded as both native capacities and native desires.

Instincts define, therefore, not only what men can do, but what they want to do. They are at once the primary instruments and the primary provocatives to action. As we shall presently see in some detail, human beings may acquire mechanisms of behavior with which they are not at birth endowed. These acquired mechanisms of response are called

habits. And with the acquisition of new responses, new motives or tendencies to action are established. Having learned how to do a certain thing, individuals at the same time learn to want to do it. But just as all acquired mechanisms of behavior are modifications of some original instinctive response, so all desires, interests, and ideals are derivatives of such original impulses as fear, curiosity, self-assertion, and sex. All human motives can be traced back to these primary inborn impulses to make these primary inborn responses.[1]

The necessity for the control of instinct. The human being's original equipment of impulses and needs constitutes at once an opportunity and a problem. Instincts are the natural resources of human behavior, the raw materials of action, feeling, and thought. All behavior, whether it be the "making of mud pies or of metaphysical systems," is an expression, however complicated and indirect, of some of the elements of the native endowments of human beings. Instinctive tendencies are, as we have seen, the primary motives and the indispensable instruments of action. Without them there could be no such thing as human purpose or preference; without their utilization in some form no human purpose or preference could be fulfilled. But like other natural resources, men's original tendencies must be controlled and redirected, if they are to be fruitfully utilized in the interests of human welfare.

There are a number of conditions that make imperative the control of native tendencies. The first of these is intrinsic to the organization of instincts themselves. Human beings are born with a plurality of desires, and happiness consists in

[1] The clearest statement of the status of instincts as both mechanisms of action and "drives" to action has been made by Professor Woodworth in his *Dynamic Psychology*. No one else, to the best of the author's knowledge, has made the distinction with the same clarity and emphasis, though it has been suggested in the work of Thorndike and McDougall. In McDougall's definition of an instinct he recognizes both the responsive self and the tendency to make the response. An instinct is, for him, an inherited disposition which determines its possessor, in respect to any object, "to act in regard to it in a particular manner, or at least to experience an impulse to such action."

an equilibrium of satisfactions. But impulses are stimulated at random and collide with one another. Often one impulse, be it that of curiosity or pugnacity or sex, can be indulged only at the expense or frustration of many others just as natural, normal, and inevitable. There is a certain school of philosophical radicals who call us back to Nature, to a life of unconsidered impulse. They paint the rapturous and passionate moments in which strong human impulses receive satisfaction without exhibiting the disease and disorganization of which these indulgences are so often the direct antecedents. A life is a long-time enterprise and it contains a diversity of desires. If all of these are to receive any measure of fulfillment there must be compromise and adjustment between them; they must all be subjected to some measure of control.

A second cause for the control of instinct lies in the fact that people live and have to live together. The close association which is so characteristic of human life is, as we shall see, partly attributable to a specific gregarious instinct, partly to the increasing need for coöperation which marks the increasing complexity of civilization. But whatever be its causes, group association makes it necessary that men regulate their impulses and actions with reference to one another. Endowed as human beings are with more or less identical sets of original native desires, the desires of one cannot be freely fulfilled without frequently coming into conflict with the similar desires of others. Compromise and adjustment must be brought about by some intelligent modification both of action and desire. The child's curiosity, the acquisitiveness or sex desire or self-assertiveness of the adult must be checked and modified in the interests of the group among which the individual lives. One may take a simple illustration from the everyday life of a large city. There is, for most individuals, an intrinsic satisfaction in fast and free movement. But that desire, exhibited in an automobile on a crowded thoroughfare, will interfere with just as normal, natural, and inevitable desires on the part of other motorists and pedestrians.

Still another imperative reason for the control of our instinctive equipment lies in the fact that instincts as such are inadequate to adjust either the individual or the group to contemporary conditions. They were developed in the process of evolution as useful methods for enabling the human animal to cope with a radically different and incomparably simpler environment. While the problems and processes of his life and environment have grown more complex, man's inborn equipment for controlling the world he lives in has, through the long history of civilization, remained practically unchanged. But as his equipment of mechanisms for reacting to situations is the same as that of his prehistoric ancestors, so are his basic desires. And the satisfaction of man's primary impulses is less and less attainable through the simple, unmodified operation of the mechanisms of response with which they are associated. In the satisfaction of the desire for food, for example, which remains the same as it was under primitive forest conditions, much more complex trains of behavior are required than are provided by man's native equipment. To satisfy the hunger of the contemporary citizens of New York or London requires the transformation of capricious instinctive responses into systematic and controlled processes of habit and thought. The elaborate systems of agriculture, transportation, and exchange which are necessary in the satisfaction of the simplest wants of men in civilization could never be initiated or carried on if we depended on the instincts with which we are born.

There are thus seen to be at least three distinct reasons why our native endowment of capacities and desires needs control and direction. In the life of the individual, instinctive desires must be adjusted to one another in order that their harmonious fulfillment may be made possible. The desires and native reactions of individuals must be checked and modified if individuals are to live successfully and amiably in group association, in which they must, in any case, live. And, finally, so vastly complicated have become the physical and the

social machinery of civilized life that it is literally impossible to depend on instincts to adjust us to an environment far different from that to which they were in the process of evolution adapted. In the light of these conditions men have found that if they are to live happily and fruitfully together, certain original tendencies must be stimulated and developed, others weakened, redirected, and modified, and still others, within limits possibly, altogether repressed. Individuals display at once curiosity and fear, pity and pugnacity, acquisitiveness and sympathy. Some of these it has been found useful to allow free play; others, even if moderately indulged, may bring injury to the individual and the group in which his own life is involved. Education, public opinion, and law are more or less deliberate methods society has provided for the stimulation and repression of specific instinctive tendencies. Curiosity and sympathy are valued and encouraged because they contribute, respectively, to science and to coöperation; pugnacity and acquisitiveness must be kept in check if people are not simply to live, but to live together happily.

But the substitution of control for caprice in the living-out of our native possibilities is as difficult as it is imperative. As already noted, instincts are imperious driving forces as well as mechanisms. While we can modify and redirect our native tendencies of fear, curiosity, pugnacity, and the like, they remain as strong currents of human behavior. They can be turned into new channels; they cannot simply be blocked. Indeed, in some cases, it is clearly the social environment that needs to be modified rather than human behavior. Though it be juvenile delinquency for a boy to play baseball on a crowded street, it is not because there is intrinsically anything unwholesome or harmful in play. What is clearly demanded is not a crushing of the play instinct, but better facilities for its expression. A boy's native sociability and gift for leadership may make him, for want of a better opportunity, a gangster. But to cut off those impulses altogether would be to cut off the sources of good citizenship. The settlement

clubs or the Boy Scout organizations in our large cities are instances of what may be accomplished in the way of providing a social environment in which native desires can be freely and fruitfully fulfilled.

Social conditions can thus be modified so as to give satisfaction to a larger proportion of natural desires. On the other hand, civilization in the twentieth century remains so divergent from the mode of life to which man's inborn nature adapts him that the thwarting of instincts becomes inevitable. Impulses, in the first place, arise capriciously, and one of the conditions of our highly organized life is regularity and canalization of action. Our businesses and professions cannot be conducted on the spontaneous promptings of instinct. The engineer, the factory worker, the business man, cannot allow themselves to follow out whatever casual desire occurs to them whenever it occurs. Stability and regularity of procedure, demanded in most professions, are incompatible with random impulsive behavior. To facilitate the effectiveness of certain industries, for example, it may be necessary to check impulses that commonly receive adequate satisfaction. Thus it may be essential to enforce silence, as in the case of telephone operators or motormen, simply because of the demands of the industry, not because there is anything intrinsically deserving of repression in the impulse to talk.

Again, the mere fact that a man lives in a group subjects him to a thousand restraints and restrictions of public opinion and law. A child may come to restrain his curiosity when he finds it condemned as inquisitiveness. We cannot, when we will, vent our pugnacity on those who have provoked it; we cannot be ruthlessly self-assertive in a group; or gratify our native acquisitiveness by appropriating anything and everything within our reach.

But because there are all these social forces making for the repression of instincts, it does not mean that these latter therefore disappear. If any one of them is unduly repressed, it does not simply vanish as a driving force in human behav-

ior. It will make its enduring presence felt in roundabout ways, or in sudden extreme and violent outbursts. Or, if it cannot find even such sporadic or fruitive fulfillments, "a balked disposition" will leave the individual with an uneasiness and irritation that may range from mere pique to serious forms of morbidity and hysteria. A man may for eight or ten hours be kept repeating the same operation at a machine in a factory. He may thereby repress those native desires for companionship and for variety of reaction which constitute his biological inheritance. But too often postponed satisfaction takes the violent form of lurid, over-exciting amusements and dissipation. The suppression of the sex instinct not infrequently results in a morbid pruriency in matters of sex, a distortion of all other interests and activities by a preoccupation with the frustrated sex motive. Assaults and lynchings, and the whole calendar of crimes of violence with which our criminal courts are crowded, are frequent evidence of the incompleteness with which man's strong primary instincts have been suppressed by the niceties of civilization. The phenomenal outburst of collective vivacity and exuberance which marked the reported signing of the armistice at the close of the Great War was a striking instance of those immense primitive energies which the control and discipline of civilization cannot altogether repress.

There has been, furthermore, a great deal of evidence adduced in recent years by students of abnormal psychology concerning the results of the frustration of native desires. When the individual is "balked" in respect to particular impulses or desires, these may take furtive and obscure fulfillments; they may play serious though obscure and unnoticed havoc with a man's whole mental life. Unfulfilled desires may give rise to various forms of "complex," distortions of thought, action, and emotion of which the individual himself may be unaware. They may make a man unduly sensitive, or fearful, or pugnacious. He may, for example, cover up a sense of mortification at failure by an unwarranted degree of

bluster and brag. A particular baffling of desire may be compensated by a bitterness against the whole universe or by a melancholy of whose origin the victim may be quite unconscious. These maladjustments between an individual's desires and his satisfactions are certainly responsible for a considerable degree of that irritation and neurasthenia which are so frequently observable in normal individuals.[1]

The facts enumerated above should make it clear why it is difficult to modify, much less completely to overcome, these strong original drives to action. They serve to emphasize the fact that by control of instinctive responses is not meant their suppression. For just as instinctive tendencies are our basic instruments of action, so instinctive desires are our basic ingredients of happiness. Just as all we can do is limited by the mechanisms with which we are endowed, so what we want is ultimately determined by the native desires with which we are born. The control of action and of desire is justified in so far as such control will the more surely promote a harmonious satisfaction of all our desires. A society whose arrangements are such that instincts are, on the whole, being repressed rather than stimulated and satisfied, is frustrating happiness rather than promoting it. At the very least, a life whose natural impulses are not being fulfilled is a life of boredom. The ennui which is so often and so conspicuously associated with the routine and desolate "gayeties" of society, the listlessness of those bored with their work or their play, or both, are symptoms of social conditions where the native endowments of man are handicaps rather than assets, dead weights rather than motive forces. It means that society is working against rather than with the grain. Discontent, ranging from mere pique and irritability to overt violence, is

[1] While the evidence in this field has been taken largely from extremely pathological cases, the distortions and perversions of mental behavior, noticeable in such cases, are simply extreme forms of the type of distortion that takes place in the case of normal individuals whose desires are seriously frustrated. See the very clear statement on the subject of "repressions" and "conflicts" in R. B. Hart's *Psychology of Insanity*.

the penalty tnat is likely to be paid by a society the majority of whose members are chronically prevented from satisfying their normal human desires. No one who has seen whole lives immeasurably brightened by the satisfaction of a suitable employment, or melancholy and irritability removed by companionship and stimulating surroundings, can fail to realize how important it is to happiness that human instincts be given generous opportunity for fulfillment.

One may say, indeed, that the evils of too complete repression of individual impulses are more than that they produce nervous strain, dissatisfaction, and, not infrequently, crime. Happiness, as Aristotle long ago pointed out, is a complete living-out of all a man's possibilities. It is most in evidence when people are, as we say, doing what they like to do. And people like to do that which they are prompted to do by the nature which is their inheritance. Freshness, originality, and spontaneity are perhaps particularly valued in our own civilization because of the multiple restraints of business and professional occupations. Even under the most perfect social arrangements there will always exist among men conflicts of desire. Their control over their environment will, of necessity, be imperfect, as will their mastery of their own passions and their clear adjustment to one another. That complete agreement between man's desires and the environment in which alone they can find their satisfaction remains at best an ideal. But it is an ideal which indicates clearly the function of control. This is obviously not to crush native desires, but to organize their harmonious fulfillment. Where men have an opportunity to utilize their native gifts they will be satisfied and interested; where native capacities and desires are continually balked, men will be discontented though well-regimented machines.

Habitual behavior. Except for purposes of analysis, life on the purely instinctive level may be said scarcely to exist in contemporary society, or for that matter, since the beginnings of recorded history. As has been already pointed out,

while men are born with an even wider variety of tendencies to act than animals, these are much more plastic and modifiable, more susceptible of training, and much more in need of it than those of the sub-human forms. Even among animals under conditions of domestication, instinct tends largely to be replaced by habitual or acquired modes of behavior. The human being, born with a nervous system and a brain in extremely unformed and plastic condition, is so susceptible to every influence current in his environment that most of his actions within a few years after birth are, when they are not the result of deliberate reflection, secondary or habitual rather than genuinely instinctive. That is, few of the simplest actions of human beings are not in some degree modified by experience. They may appear just as automatic and immediate as if they were instinctive, and indeed they are, but they are learned ways rather than the unlearned ways man has as his possession at birth.

The mechanism of habit. The implications of habitual behavior can better be understood after a brief analysis of the mechanism of such action. An instinct has been defined as a tendency to act in a given way in response to a given stimulus. What happens when a stimulus prompts the organism to respond in a given way, is that some sensory nerve, whether of taste or touch or sound, sight, smell, or muscular sensitivity, receives a stimulus which passes through the spinal cord to a motor nerve through which some muscle is "innervated" and a response made. In the simplest type of reflex action, such as the winking of an eye in a blinding light, or the withdrawing of a hand from flame, such is the physiology of the process. But where an immediate adjustment cannot be made by an instinctive response, where satisfaction is not secured by the passage of a sensory stimulus to an immediate motor response, the nervous impulse is, as it were, deflected to the brain area, auditory, visual, or whatever it may be, which is associated with that particular type of sensation. The path to the brain area is far from simple; the nervous im-

pulse, which might be compared to an electric current, must pass through many nerve junctions known as "synapses," at which points there is some not completely understood chemical resistance offered to the passage of the nerve current. On passing through the network of nerves in the brain area, the current passes back again through a complicated maze of connections to a motor nerve which insures a muscular response. The first time a stimulus passes through this network the resistance offered at the nerve junction or synapse is very high; at succeeding repetitions of the stimulus the resistance is reduced, the nerve current passes more rapidly and fluently over the paths it has already traveled, and the action resulting becomes as direct and automatic as if it were an original reflex action.[1]

The acquisition of new modes of response. Expressed in less technical language this means simply that human beings can learn by experience, and that they tend to repeat actions they have once learned. Where an animal is perfectly adjusted to its environment, all stimuli issue in immediate and nicely adjusted responses. This happens only where the environment is very simple and stable, and where in consequence no complexity of structure or action is necessary. In the clam and the oyster, and in some of the lower vertebrates, perhaps, instinctive activity is almost exclusively present. But in the case of man, so complicated are the situations to which he is exposed that random instinctive responses will not solve his problems. He must, as with his highly modifiable nervous system he can, acquire new modes of response which will, in the complexity of new situations serve as effectively as his original tendencies to act would serve him in a simpler and stabler environment. A human being in a modern city cannot live by instinct alone; he must acquire an enormous number of habits to meet the variety of complex situations he meets in daily life. A monkey exists with fairly fixed native tendencies to act. But civilization

[1] See McDougall: *Physiological Psychology.*

could never have developed if in man new ways could not be acquired to meet new situations, and if these new ways could not be retained and made habitual in the individual and the race.

Trial and error and deliberate learning. Whenever, as happens a large number of times daily in the life of the average man, old ways of response, inborn or formerly acquired, are inadequate to meet a new situation, there are two methods of acquiring a new and more adequate response. One is the method of trial and error, already discussed, whereby animals and humans try every possible instinctive response to a situation until one brings satisfaction and is retained as a habitual reaction when that situation recurs. The other is a delay in response, during which delay reflection, a consideration of possible alternatives, and a conscious decision, take place. The technique of this latter process will be discussed more specifically in the next chapter.

Whether acquired by trial and error, or through reflection, learned acts are, the first time they are performed, frequently imperfect, only partly effective, and performed with some difficulty. With successive repetitions their performance becomes more rapid, more immediate, and more adjusted to the specific situation to be met. And as they become more familiar responses to familiar stimuli they cease to be conscious at all. They are performed with almost as little difficulty or attention as normal breathing.

Some conditions of habit-formation. The acquisition of habits is so important in the education of human beings that the conditions under which they can be acquired and made permanently effective have been closely studied. From experiments certain fundamental conclusions stand out. A habit is acquired by repetition, and the "curves of learning" show certain recurrent features. In the first few repetitions of an acquired activity, there is progress in the rapidity, effectiveness, and accuracy with which the response is made. There is, up to a certain point, an almost vertical rise in the

learning curve. After varying numbers of repetitions, depending somewhat on the particular individual, there occur what are known as "plateaux," during which no progress in speed or accuracy of response is to be observed. In experiments with the learning of typewriting, for example, it has been found that the beginner makes rapid progress up to the point, say, where he can write fifty words a minute without error; there is a long interval not infrequently before he can raise his efficiency to the point of writing seventy words a minute correctly. Analogous conditions have been observed in the speed with which the sending and receiving of telegraphic messages is learned. These "plateaux" of learning are sometimes to be accounted for by muscular fatigue. Frequently there is actual progress in learning during these apparent intervals of marking time. Some of the less observable features of skill in performance which only later become overt in speed and accuracy are being attained during these seemingly profitless and discouraging intervals. Not infrequently in the acquisition of skill in the playing of tennis or the piano, or in the solution of mathematical problems, a decided gain in skill and speed comes after what seems to be not only lack of progress but decided backsliding.[1] It is this which led William James to quote with approval the aphorism that one learns to skate in summer and swim in winter.

Drill *versus* attentive repetition in learning. The rapidity with which habits may be acquired and the permanency with which they may be retained depend on other factors than simply that of repetition. Mere mechanical drill is effective in the acquisition of simple mechanical habits. The most attentive appreciation of the proper things to be done in playing tennis or the piano will not by itself make one an expert in those activities. The effective responses must actually be performed in order that the appropriate connections within the nervous system may be made, and may become habitual.

[1] See Ladd and Woodworth: *Physiological Psychology*, pp. 542–92.

A habit is physiologically nothing but a certain set or direction given to paths in the nervous system. These paths become fixed, embedded, and ingrained only when nerve currents pass over them time and time again.

Mere repetition, on the other hand, will not suffice in the acquisition of complex habits of action. The learning of these requires a deliberate noting and appreciation of the significant factors in the performance of an activity, and the consciously chosen repetition of these in succeeding instances until the habit is well fixed. One reason why animals cannot be taught so wide a variety of complex habits as can the human being is that they cannot keep their attention fixed on successive repetitions, and that in learning they literally do not know what they are doing. They cannot, as can humans, break up the activity which they are in process of learning into its significant factors, and attend to these in successive repetitions. The superiority of deliberate learning over the brute method of trial and error consists precisely in that the deliberate and attentive learner can pick out the important steps of any process, and learn rapidly to eliminate random and useless features of his early performances without waiting to have the right way "knocked into him" by experience. He will short-circuit the process of learning by choosing appropriate responses in advance, noting how they may be made more effective and discovering methods for making them so, and for eliminating useless, random, and ineffective acts. What we call the "capacity to learn" is evident in marked degree where there is alert attention to the steps of the process in successive repetitions. The truth in the assertion that an intelligent man will shortly outclass the merely automatically skillful in any occupation or profession requiring training, lies not in any mysterious faculty, but in the peculiarly valuable habit of attending with discriminating interest to any process, and learning it thereby with vastly more economical rapidity. Genius may be more than what one writer described it, "a painstaking attention to detail"; but a

painstaking attention to the meaning and bearing of details it most decidedly is.

Learning affected by age, fatigue, and health. There are certain conditions not altogether within the control of the individual which affect the rapidity with which habits are acquired. One of the most important of these is fatigue. Connections among the fibers that go to make up the nervous system cannot be made with ease and rapidity when the organism is fatigued. At such times there seems to be an unusually high resistance at the synapses or nerve junctions (where there is a lowering of resistance to the passage of a nerve current when habits are easily formed). After a certain point of fatigue, whether in the acquisition of motor habits or the memorizing of information, in which the process is much the same, the rate of learning is much slower and the degree of accuracy much less. The length of time through which habits are retained when acquired during a state of fatigue is also much less than under a more healthy and resilient condition of the organism.

The point of fatigue varies among different individuals and in consequence the conditions of habit-formation vary. But some conditions remain constant. For instance, in experiments with memory tests (memory being a form of habit in the nervous system), material memorized in the morning seems to be most rapidly acquired and most permanently retained.

The age and health of the individual also are important factors in the capacity to learn, or habit-formation. Conditions during disease are similar to those obtaining during fatigue, only to a more acute degree. The toxins and poisons in the nervous system at such times operate to prevent the formation of new habits and the breaking of old ones. For while the synapses (nerve junctions) may offer high resistance to the passage of a new stimulus, they will lend themselves more and more readily to the passage of stimuli by which they have already been traversed.

That the age of the individual should make a vast difference in the capacity to acquire new habits and to modify old ones is obvious from the physiology of habit already described. When the brain and nervous system are both young, there are few neural connections established, and the organism is plastic to all stimuli. As the individual grows older, connections once made tend to be repeated and to be, as it were, unconsciously preferred by the nervous system. The capacity to form habits is most pronounced in the young child in whose nervous structure no one action rather than another has yet had a chance to be ingrained. The more connections that are made, the more habits that are acquired, the less, in a sense, can be made. For the organism will tend to repeat those actions to which it has previously been stimulated, and the more frequently it repeats them the more frequently it will tend to. So that, as William James pointed out, by twenty-five we are almost literally bundles of habits. When the majority of acts of life have become routine and fixed, it is almost impossible to acquire new ways of acting, since the acquisition of new habits seriously interferes with the old, and old habits physiologically stay put.

Habit as a time-saver. This fact, that habits can be acquired most easily early in life, and that those early acquired become so fixed that they are almost inescapable, is of supreme importance to the individual and society. It is in one sense a great advantage; it is an enormous saver of time. In the famous words of James:

> The great thing, then, in all education, is to *make our nervous system our ally instead of our enemy.* It is to fund and capitalize our acquisitions, and live at ease upon the interest of the fund. *For this we must make automatic and habitual, as early as possible, as many useful actions as we can,* and guard against the growing into ways that are likely to be disadvantageous to us, as we would guard against the plague. The more of the details of our daily life we can hand over to the effortless custody of automatism, the more our higher powers of mind will be set free for their own proper work. There is no more miserable human being than one in whom nothing

is habitual but indecision, and for whom the lighting of every cigar, the drinking of every cup, the time of rising and going to bed every day, and the beginning of every bit of work, are subjects of express volitional deliberation. Full half the time of such a man goes to the deciding, or regretting, of matters which ought to be so ingrained in him as practically not to exist for his consciousness at all. If there be such daily duties not yet ingrained in any one of my readers, let him begin this very hour to set the matter right.[1]

The ideal of efficiency is the ideal of having the effective thing habitually done with as little effort and difficulty as possible. This in the case of human beings is, as James points out, attained when good habits are early acquired and when as large a proportion as possible of purely routine activity is made effortless and below the level of consciousness. To do as many things as possible without thinking is to free thinking for new situations. Our experiences would be very restricted indeed if we could not reduce a large portion of the things we do to the mechanics of habit. Walking, eating, these, though partly instinctive, were once problems requiring thought, effort, and attention. If we had to spend all our lives learning to dress and undress, to find our way about our own house or city, to spell and to pronounce correctly, it is clear how little variety and diversity we should ever attain in our lives. By the time we are twenty these fundamental habits are so firmly fixed in us that, for better or for worse, they are ours for life, and we are free to give our attention to other things. Again in the words of James:

We all of us have a definite routine manner of performing certain daily offices connected with the toilet, with the opening and shutting of familiar cupboards, and the like. Our lower centers know the order of these movements, and show their knowledge by their "surprise" if the objects are altered so as to oblige the movement to be made in a different way. But our higher thought centers know hardly anything about the matter. Few men can tell off-hand which sock, shoe, or trousers-leg they put on first. They must first mentally rehearse the act; and even that is often insufficient — the act must be *performed*. So of the questions, Which valve of my

[1] James: *Psychology*, vol. 1, p. 122.

double door opens first? Which way does my door swing? etc. I cannot *tell* the answer; yet my *hand* never makes a mistake. No one can *describe* the order in which he brushes his hair or teeth; yet it is likely that the order is a pretty fixed one in all of us.[1]

Habit as a stabilizer of action. Habit not only thus saves time, but stabilizes action, and where the habits acquired are effective ones, this is invaluable. Habits of prompt performance of certain daily duties on the part of the individual are a distinct benefit both to him and to others, as certain customary efficient office practices, when they are really habitual, immensely facilitate the operation of a business. On a larger scale habit is "society's most precious conservative agent." Individuals not only develop personal habits of dress, speech, etc., but become habituated to social institutions, to certain occupations, to the prestige attaching to some types of action and the punishment correlated with others. Education in the broadest sense is simply the acquisition of those habits which adapt an individual to his social environment. It is the instrument society uses to hand down the habits of thinking, feeling, and action which characterize a civilization. Society is protected from murder, theft, and pillage by law and the police, but it is even better protected by the fact that living together peacefully and coöperatively is for most adults habitual. In a positive sense the multifarious occupations and professions of a great modern city are carried on from day to day in all their accustomed detail, not because the lawyers, the business men, the teachers, who practice them continuously reason them out, nor from continuous instinctive promptings. They are striking testimony to the influence of habit. As a recent English writer puts it:

> The population of London would be starved in a week if the flywheel of habit were removed, if no signalman or clerk or policeman ever did anything which was not suggested by a first-hand impulse, or if no one were more honest or punctual or industrious than he was led to be by his conscious love, on that particular day, for his master

[1] James: *loc. cit.*, vol. I, p. 115.

or for his work, or by his religion, or by a conviction of danger from the criminal law.[1]

From etiquette and social distinction, from formalities of conversation and correspondence, of greeting and farewell, of condolence and congratulation to the most important "customs of the country," with respect to marriage, property, and the like, ways of acting are maintained by the mechanism of habit rather than by arbitrary law or equally arbitrary instinctive caprice.

Disserviceable habits in the individual. Habitual behavior which can become so completely controlling in the lives of so many people is not without its dangers. The nervous system is originally neutral, and can be involved on the side either of good or evil. A human born with a plastic brain and nervous system must acquire habits, but that he will acquire good habits (that is, habits serviceable to his own happiness and to that of his fellows) is not guaranteed by nature. Habits are indeed more notorious than famous, and examples are more frequently chosen from evil ones than from good. Promptness in the performance of one's professional or domestic duties, care in speech, in dress and in demeanor, are, once they are acquired, permanent assets. But if these fail to be developed, dishonesty or superficiality, slovenliness in dress and speech, and surliness in manner, may and do become equally habitual. The significance of this has been eloquently stated at the close of James's famous discussion:

> The hell to be endured hereafter, of which theology tells, is no worse than the hell we make for ourselves in this world by habitually fashioning our characters in the wrong way. Could the young but realize how soon they will become mere walking bundles of habits, they would give more heed to their conduct while in the plastic state. We are spinning our own fates, good or evil, and never to be undone. Every smallest stroke of virtue or of vice leaves its never-so-little scar. The drunken Rip Van Winkle, in Jefferson's play, excuses himself for every fresh dereliction by saying, "I won't count this time!" Well, he may not count it, and a kind Heaven may not

[1] Graham Wallas: *Great Society*, p. 74.

count it, but it is being counted none the less. Down among his nerve cells and fibres, the molecules are counting it, registering and storing it up to be used against him when the next temptation comes. Nothing we ever do is, in strict scientific literalness, wiped out.[1]

Social inertia. If the acquisition of bad, that is, disserviceable habits, is disastrous to the individual, it is in some respects even worse in the group. The inertia of the nervous system, the tendency to go on repeating connections that have once been made is one of the strongest obstacles to change, however desirable. It is not only that habits of action have been established, but that with them go deep-seated habits of thought and feeling. The repression of people's accustomed ways of doing things may bring with it a sense of frustration almost as complete and painful as if these obstructed activities were instinctive. This is not true merely in the melodramatic instances of drug addicts and drunkards. It is true in the case of social habits which have become established in a large group. Any Utopian that dreams of revolutionizing society overnight fails to take into account the enormous control of habits over groups which have acquired them, and the powerful emotions, amounting sometimes to passion, which are aroused by their frustration.

The importance of the learning habit. That habit is at once the conserver and the petrifier of society has long been recognized by social philosophers. There is one habit, however, the acquisition of which is itself a preventive of the complete domination of the individual or the group by hard and fast routine. This is the habit of learning, which is necessary to the acquisition of any habits at all. Man in learning new habits, "learns to learn." This ability to learn is, of course, correlated with a plasticity of brain and nerve fiber which is most present in early youth. The disappearance of this capacity is hastened by the pressure which forces individuals in their business and professional life to cling fast to certain habits which are prized and rewarded by the group. A sedu-

[1] James: *loc. cit.*, vol. I, p. 127.

lous cultivation on the part of the individual of the habit of open-minded inquiry, of the habit of learning, and the encouragement of this tendency by the group are the only antidotes that can be provided against this marked physiological tendency to fossilization and the frequent social tendencies in the same direction.

Whether habits shall master us, or whether we shall be their masters, depends also on the method by which they were acquired. If they were learned merely through mechanical drill, they will be fixed and rigid. If they were learned deliberately to meet new situations, they will not be retained when the conditions they were acquired to meet are utterly changed.

The specificity of habits. One important consideration, finally, that must be brought to consideration is that habits are, like instincts, specific. They are not general "open sesames" which, learned in one situation, will apply with indiscriminate miraculousness to a variety of others. Just as an instinct is a definite response to a definite stimulus, so is a habit. The chief and almost only observable difference is that the former is unlearned, while the latter is learned or acquired.

But while habits are specific, they are within limits transferable. Such is the case when a situation which calls out a certain habitual response is paralleled in significant points by another. Thus the situation, one's-room-at-home-cluttered-up-with-a-miscellany-of-books-papers-tennis-apparatus-and-clothing, has sufficiently similar significant points to the situation, one's-office-littered-with-documents-old-letters-manuscripts-blueprints-and-proofs, to call forth, if the habit has been established in one case, the identical response of "tidying up" in the other. But unless there are marked points of similarity between two different sets of circumstances, specific habits remain specific and non-transferable. There is in the laws of habit no guarantee that an industrious application to the batting averages of the major league on the part of an

alert twelve-year-old will provoke the same assiduous assimilation of the facts of the American Revolution; that a boy who works hard at his chemistry will work equally hard at his English, or that one who is careful about his manners and pronunciation in school will display the slightest heed to them among his companions on the ball-field. One of the most cogent arguments against the stereotyped teaching of Latin and Greek has been the serious doubt psychologists have held as to whether four years' training in Latin syntax will develop in the student general mental habits which will be applicable or useful outside the Latin classroom.

The older "faculty" psychologists presumed that different subjects trained various so-called "faculties" of "memory," "imagination," and "intellect." It has now become clear on experimental evidence that in education we are training no isolated faculties, but are training the individual to certain specific habits. The more widely applicable the habits are, obviously the more valuable or dangerous will they be in the conduct of life. But when habits do become general, such as a habit of promptness, honesty, and regularity, not in one situation but "in general," it is because they are something more than habits in the strict physiological sense. They are intellectual as well as merely motor in character; they are deliberate and conscious methods rather than mechanical rules of thumb. Habits that have been drilled into an individual will appear only when the situation very closely approximates the one in which the drill has been performed. The cat that has learned to get out of a certain type of cage by pressing a button will be utterly at a loss if the familiar features of the cage are changed. The intelligent human will detect and take pains to detect among the minor differences of the situation some significant fact which he has met in another setting, and he will apply a habit useful in this new situation despite the slightly changed accompanying circumstances. The man who can drive an automobile with reflective appreciation of the processes involved, who knows, as

we say, what he is doing, will not long be baffled by a car with a slightly different arrangement of levers and steering-gear, nor be completely frustrated when the car for some reason fails to move. As happened in many notable instances during the World War, trained executives were not long at a loss when they shifted from the management of a steel plant to a shipyard, or from large-scale mining operations in Montana to large-scale relief work in Belgium.

The conscious transference of habits. When habits are consciously acquired, they may be consciously transferred with modifications to situations slightly different from those in which they were first learned. Merely mechanical habits are a hindrance in any save the most mechanical work. An alert and conscious method of learning, which means the development of habits *as* methods of control, will enable the individual to modify habits acquired in slightly different circumstances to new situations where the major conditions remain the same. To be merely habitual is to be at best an efficient machine, utterly unable to do anything except to run along certain grooves, to respond like an animal trained to certain tricks. It means, moreover, a loss of richness in experience. When a profession becomes routinated it becomes meaningless; a mere making of the wheels go round. The spirit of alert and conscious inquiry must be maintained if life is not to become a mere repeated monotony.

An alert and conscious adjustment of habits to a changing environment constitutes intelligence. The technique of this adjustment is the technique of thinking or of reflective behavior, which we shall examine in more detail in the following chapter.

Emotion. All human action, whether on the plane of instinct, habit, or reflection, is, to a lesser or greater degree, accompanied by emotion. While there is considerable controversy among psychologists as to the precise nature of emotion, and the precise conditions of its causation, its general features and significance are fairly clear. Emotion may be

most generally defined as an awareness or consciousness on the part of the individual of his experiences, both those in which he is the actor and those in which he is being passively acted upon. This awareness or consciousness is not detached intellectual perception, but is accompanied by, as it is by some held to be merely the consciousness of, certain specific bodily disturbances. Thus the emotions of fear and grief are not cold and abstract perceptions of situations that belong in the classes dangerous or deplorable, respectively. The awareness of these situations by the individual is intimately and invariably connected with certain outward bodily manifestations and certain inner organic disturbances. Fear, rage, pity, and the like are not unimpassioned judgments, but highly charged physical changes. So close, indeed, is the connection between specific bodily conditions and the subjective or inner consciousness that we call emotion, that James and Lange simultaneously came to the conclusion that emotions are nothing more nor less than the blending of the complex organic changes that occur in any given emotional state. Thus James:

> What kind of an emotion of fear would be left if the feeling neither of quickened heart-beats nor of shallow breathing, neither of trembling lips nor of weakened limbs, neither of goose-flesh nor of visceral stirrings, were present, it is impossible for me to think. Can anyone fancy the state of rage, and picture no ebullition in the chest, no flushing of the face, no dilation of the nostrils, no clenching of the teeth, no impulse to vigorous action, but in their stead limp muscles, calm breathing, and a placid face? The present writer, for one, certainly cannot. The rage is as completely evaporated as the sensations of its so-called manifestations, and the only thing that can possibly be supposed to take its place is some cold blooded and dispassionate judicial sentence, confined entirely to the intellectual realm, to the effect that a certain person or persons merit chastisement for their sins. In like manner of grief; what would it be without its tears, its sobs, its suffocation of the heart, its pang in the breast-bone? A feelingless cognition that certain circumstances are deplorable, and nothing more.[1]

[1] James: *Psychology*, vol. II, p. 452.

Indeed, so completely did James think the emotions were explicable as the inner feeling of the complex organic sensations which go to make up each of them that he did not think it misleading to say "we feel sorry because we cry, angry because we strike, afraid because we tremble; we do not cry, strike, or tremble because we are sorry, angry, or fearful, as the case may be."

Whether or not emotions are completely to be explained as the inner or subjective aspect of the complex of organic disturbances which accompany fear, rage, and the like, and which are caused immediately by the perception of the appropriate objects of these emotions, it is certainly true that emotional awareness and bodily disturbances are very closely connected.[1]

Various attempts have been made to classify the emotions which are, in ordinary experience, infinitely subtle and complex. The subtlety and variety of emotion James explains as the result of the subtle and imperceptible differences in the complex of sensations which occur in any given situation. In general, it has been recognized that the emotions are very closely connected with the primary tendencies of man. McDougall, for example, says that each of the great primary impulses is accompanied by an emotion. Indeed, McDougall considers, as earlier noted, that the emotion is the affective or conscious aspect of an instinct which, at the same time, has a perceptual and impulsive aspect; that, in the case of fear, the perceptual aspect is the instinctive mechanism for recog-

[1] Recent experiments by Dr. Cannon at Harvard have shown the specific bodily disturbances which accompany anger, fear, etc. In particular, Dr. Cannon, and others, have noted that in the emotional conditions of fear and anger the glands, located near the kidneys, discharge a fluid into the blood stream, which fluid stimulates the heart to activity, constricts the blood vessels of the internal organs, causes the liver to pour out into the blood its stores of sugar, and affects in one way or another all the organs of the body. The general effect is to put the body into a state of preparedness for the activities connected with the emotion, whether flight in the case of fear, attack as in the case of anger. This has led Professor Woodworth to define emotion as, at least in part, "the way the body feels when it is prepared for a certain reaction." See the latter's *Dynamic Psychology*, pp. 51–59.

nizing objects of danger, the impulsive aspect is the tendency toward flight, and the affective aspect is the inner feeling or awareness of fear. Thus, for McDougall, the tender emotion is the emotional aspect of the instinct of pity, anger of the instinct of pugnacity, which is, as an impulse, the tendency to strike and destroy.

As a matter of fact, as McDougall himself admits, emotions are seldom experienced in unmixed forms, and it is very difficult to reduce the infinite variety of emotional experiences to any primary forms. One may well agree with James that "subdivisions [in the psychological demarcation of the emotions] are to a great extent either fictitious or unimportant, and . . . pretenses to accuracy, a sham." In general, one may say that emotions are closely connected with the native tendencies of human beings and are aroused by both their fulfillment, their conflict, and their frustration. The variety of emotions results from the fact that no single one of our instincts is stimulated at a time, and that the peculiar specific quality of each emotional experience is due to the specific point of conflict, fulfillment, or frustration in each particular case. It may be further noted that those emotions are, in general, pleasantly toned which accompany the fulfillment or the approach to the fulfillment of a native disposition; and those are unpleasantly toned which accompany their frustration or conflict. The depth and intensity of the emotional disturbance seem to depend on the degree and extent to which strong instinctive or habitual impulses have become involved. For as habits of action may be acquired, so also may emotions become associated habitually with them. The emotional disturbances connected with the fulfillment, frustration, and conflict of habits may be just as intense as those connected with similar phenomena in the case of instincts.

In one sense these emotional disturbances impede action, certainly action on the reflective level. It is the capacity and function of reflection to solve and adjust precisely those conflicts of competing impulses during which emotional dis-

turbances occur. But the reflective process is confused and distorted in conflicts of native or habitual desires by these emotional disturbances which accompany them. It is proverbially difficult to think straight when angry; the surgeon in performing an operation must not be moved by pity or fear; and love is notoriously blind. The facts with which reflection must deal are presented in distorted and exaggerated form under the stress of competing impulses. Stimuli become loaded with emotional associations. They are glaring and conspicuous on the basis of their emotional urgency rather than on the ground of their logical significance. The paralysis or complete disorganization of action which occurs in extreme cases of hysteria takes place to some extent in all less extreme instances of emotional disturbances.

Emotions, on the other hand, serve to sustain, and, in their less violent form, to facilitate action. It has already been noted that the organic disturbances which are so conspicuous a feature of emotion are extremely important in preparing the body for the overt actions in which these emotions always tend to issue. And it is unquestionable that emotions, though in more or less obscure ways, call up reserves of energy in the service of the activity in connection with which the emotion has been aroused. While very violent emotions, as in the case of extreme anger or fear or pity, confuse, disorganize, and even paralyze action, in more moderate form they rather serve to stimulate and reinforce it. Emotions are, in many cases, merely the inner or subjective awareness of one of these great driving forces, or a complex of them. Anger, pity, and fear, in their less extreme forms, pour floods of energy into the activities in which they take overt expression. It needs no special knowledge to recognize the fact that the normal interests and enterprises of life are quickened and sustained when some great emotional drive can be roused in their support. Ambition, loyalty, love, or hate may stir men to and sustain them in long and difficult enterprises which they would neither undertake nor continue were these

motive forces removed. The soldier does not fight persistently and well wholly, or often even in part, because he has thought out the situation and found the cause of his country to be just. He is stirred and sustained by the energies which the emotional complex called "patriotism" has roused and concentrated toward action. A scientist performing long and difficult researches, a father sacrificing rest and comfort that his children may be well provided for, a boy working to pay his way through college, are all persisting in courses of action, because of the driving power which the emotions, more or less mixed, of curiosity, or tenderness, or self-assertion have released.

But just as the original nature with which man is born is modifiable, so are his emotional reactions. Each individual's emotional reactions are peculiar and specific, because of the particular contacts to which they have been exposed, and the organization of instincts and habits which have come to be their more or less fixed character. Any emotional experience consists of an intermingling of many and diverse feelings. And these particular complexes of emotions become for each individual organized about particular persons or objects or situations. The emotional reactions of an individual are, indeed, accurately symptomatic of the character of the individual and the culture of his time. They are aroused, it goes without saying, on very different occasions and by very different objects, among different men and different groups. In the sixteenth century pious persons could watch heretics being burned in oil with a sense of deep religious exaltation. Certain Fijian tribes slaughter their aged parents with the most tender filial devotion. In certain savage communities, to eat in public arouses on the part of the individual a sense of acute shame.

Since those emotions are, on the whole, pleasantly toned which accompany the fulfillment of instinctive and habitual impulses, and those unpleasantly toned which accompany their frustration, it becomes, as Aristotle pointed out, of the

most "serious importance" early to habituate men to the performance of socially useful actions. If good or useful actions are early made habitual, their performance will bring pleasure, and will thereby be better insured than by any amount of preaching or punishment. If the actions which the group approves are not early made habitual in the younger members of the group, they will not be enforced either through logic or electrocution. It is not enough to give people reasons for doing good, they will only do it consistently if the opposite arouses in them more or less abhorrence. People learn to modify their actions on the basis of the pleasure or pain they find in their performance, and the pleasure or pain they will experience depends on the actions to which they are habituated and the emotions which have come to be their characteristic accompaniments.

CHAPTER III

REFLECTION

Instinct and habit *versus* reflection. In the two types of behavior already discussed, man is, as it were, "pushed from behind." In the case of instinct he performs an action simply because he *must* perform it. Willy-nilly he withdraws his hand from fire, eats when hungry, and sleeps when tired. In the case of habits, once they are acquired, he is also largely dominated by circumstances beyond his own control. The bottle is to the confirmed drunkard almost an irresistible command to drink, the alarm clock to one accustomed to it an equally imperative and not-to-be-disregarded order to arise. The story of the old veteran who was carrying home his dinner and who dropped his hands to his side and his dinner to the gutter when a practical joker called "Attention"; the pathetic plight of the superannuated business man who is totally at a loss away from his familiar duties, are often quoted illustrations of how completely habit may determine a man's actions.

But while in a large portion of our daily duties we are thus at the beck and call of the instincts which are our inheritance and the habits which we have acquired, we may also *control* our actions. Instead of performing actions as immediate and automatic responses to accustomed stimuli, we may determine our actions, single or consecutive, in the light of absent and future results. To act thus is to act reflectively, and to act reflectively is the only escape from random acts prompted by instinct and routine ones prompted by habit.

To act reflectively is to delay response to an instinctive or habitual stimulus until the various possibilities of action and the results associated with each have been considered. An action performed instinctively or habitually is automatic; it is performed not on the basis of what will be the result, but

simply as an immediate response to a present stimulus. But an act (or a series of acts) reflectively performed is performed in the light of the results that are prophetically associated with them. In the case of instinct and habit, the individual almost literally does not know what he is about. In reflective activity he does know, and the more thorough the reflective process, the more thorough and precise is his knowledge. He performs actions *because* they will achieve certain results, and he is conscious of that causal connection, both before the action is performed when he perceives the results imaginatively, and after it is performed when he sees them in fact.

The origin and nature of reflection. Reflection, it must be noted in the first place, is not a thing, but a process. It is a process whereby human beings adjust themselves to a continuously changing environment. Our instincts and habits suffice to adapt us to that large number of recurrent similar situations of which our experience in no small measure exists. In such cases the habitual response will bring the usual satisfaction. Walking, dressing, getting to familiar places, finding the electric button in well-known rooms, opening often-opened combinations — these operations are all adequately accomplished by the fixed mechanisms of habit. But we meet as frequently with novel situations where the accustomed or instinctive reactions will not bring the desired satisfaction. One response or a number of responses will not adjust the individual satisfactorily to external conditions; or there may be a conflict between a number of impulses all clamoring for satisfaction at once. Reflection thus begins either in a maladjustment between the individual and his environment or in a conflict of impulses within the same person.

Where such a maladjustment occurs, the uneasiness, discomfort, and frustration of action may be removed in one of two ways. Adjustment may be achieved, as we have already seen, through physical trial and error, through a hit-and-miss experimentation with every possible response until the appro-

priate one is made. This is the only way in which animals can learn to modify their instinctive tendencies into habits more adequate to their conditions. The more economical and effective process, one peculiar to human beings, is that of reflection. To think or to reflect means to postpone response to a given problematic situation until the possible consequences of the possible responses have been mentally traced out. Instead of *actually* making every response that occurs to us, we make all of them *imaginatively*. Instead of consuming time and energy in physical trial and error, we go through the process of mental trial and error. We make no response at all in action until we have surveyed all the possibilities of action and their possible consequences. And when we do make a response we make it on the basis of those foreseen consequences.[1]

In other words, the situation is analyzed. What is the end or adjustment sought, what are the possible responses, and how far is each of them suited as a means to achieving the satisfaction sought? Instead of going through every random course of action that suggests itself, each one is "dramatically rehearsed." Finally, that response is made which gives most promise in terms of its prophesied consequences of adjusting us to our situation.

Illustration of the reflective process. A student may, for example, be seated at his study, preparing for an examination. A friend enters and suggests going for a walk or to the theater. If the student were to follow this first immediate impulse he would, before he realized it, be off for an evening's entertainment. But instead of responding immediately, dropping his books, reaching for his hat, opening the door, and ringing for the elevator (a series of habitual acts initiated by the instinctive desire for rest, variety, and companion-

[1] The possibilities of response that do occur to us are, on the whole, determined by past training and native differences in temperament. But part of the process of reflection is, as we shall see in the chapter on "Science and Scientific Method," concerned with deliberately enlarging the field of possible responses in the solution of a given problem.

ship), he may rehearse in imagination the various possibilities of action. In general terms, what happens is simply this: [1]

On the one hand, the gregarious instinct, the desire for rest, native curiosity, and an acquired interest in drama may prompt him strongly to go to the theater. On the other hand, the habits of industry, ambition, self-assertion, and studying in the evening urge him to stay at home and study. The first course of action may, for the moment, be immediately attractive and stimulating. But instead of responding to either immediately, the student rehearses dramatically the possibilities associated with each. On the one hand are the immediate satisfactions of rest, amusement, and companionship. But as further consequences of the impulse to go out to the theater are seen — or, rather, are foreseen — failure in the examination, the loss of a scholarship, pain to one's family or friends, and chagrin at the frustration of one's deepest and most permanent ideals. The second course of action, to stay at home and study, though it is seen to have connected with it certain immediate privations, is foreseen to involve the further consequences of passing the examination, keeping one's scholarship, and maintaining certain personal or intellectual standards one has set one's self. Even if the student decides to follow the first course of action to which an immediate impulse has prompted him, his act is different in quality from what it would have been if he had not reflected at all. The student goes out fully aware of the consequences of what he is doing; he goes *for* the immediate pleasure and *in spite of* the possible failure in the examination. The very heart of reflective behavior is thus seen to lie in the fact that present stimuli are reacted to, not for what they are as immediate stimuli, but for what they signify, portend, imply, in the way of consequences or results. And a response made upon reflection is made on the basis of these imaginatively realized consequences. We connect what we do with the results that

[1] The technique of reflection will be discussed in detail in the chapter on "Science and Scientific Method."

flow from the doing, and control our action in the light of that prophetically realized connection.

The process is obviously not always so simple as that described in the above illustration. In the first place, more than two courses of action may suggest themselves. And the consequences of any one of them may be far more complex and far more obscure than any suggested in the above. For an individual to be able to decide a problem on the basis of consequences imaginatively foreseen, it is often necessary to institute a very elaborate system of connecting links between an immediately suggested course of action and its not at all obvious results. "Thinking a thing out" involves precisely this introduction of connecting links, or "middle terms," between what is immediately given or suggested and what necessarily, though by no means obviously, follows. This is illustrated in the case of any more or less theoretical problem and its solution. To perceive, for example, the connection between atmospheric pressure and the rise of water in a suction pump involves the introduction of connecting links in the form of the general law of gravitation, of which atmospheric pressure is a special case.

But the same is true of practical problems. A young man may be trying to decide whether or not to take a nomination to the training course at West Point. He may be attracted by the four years' training, and highly value the results of it. He may think, however, that the training involves an obligation to serve in the army; it may mean, for a long time, service in some remote army post. His decision may be determined by this last consideration, which required a series of intermediate "linking" ideas to bring to light.

The technique of scientific or expert thinking is, in large part, concerned with devices for enabling the thinker more securely to trace the obscure and remote connections between actions and their consequences, between causes and effects. But, whether simple or complex, the essential feature of reflective activity is that it is action performed in the light of

consequences foreseen in imagination. Physical stimuli are not responded to immediately with physical action. They are responded to as symbols, signs, or portents; they are taken as symptoms of the results that *would* follow if they *were* acted upon. That is, they are, until decision is made, reacted to imaginatively. When an actual response is finally made, it is made on the basis of the results that have been more or less accurately and directly anticipated in imagination.

Reflection as the modifier of instinct. Reflection is primarily a revealer of consequences. Instead of yielding to the first impulse that occurs to him, the thinking man considers where that impulse, if followed out, will lead. And since man is moved by more than one impulse at a time, reflection traces the consequences of each, and determines action on the basis of the relative satisfactions it can prophesy after careful inquiry into the situation. To reflect is primarily to query a stimulus, to find out what it means in terms of its consequences. The more alert, persistent, and careful this inquiry, the more will instinctive tendencies be checked and modified and adjusted to new situations.

In the discussion of the acquisition of habits, it was pointed out that useful habits may be acquired most rapidly by an analysis of them into their significant features. The speed with which random instinctive actions are modified into a series of useful habitual ones depends intimately upon how clear and detailed is the individual's appreciation of the results to be achieved by one action rather than another. A large part of learning even among humans is doubtless trial and error, random hit-or-miss attempts, until after successive repetitions, a successful response is made and retained. But human learning and habit-formation are so much more various and fruitful than those of animals precisely because human beings can check and modify instinctive responses in the light of consequences which they can foresee. These foreseen consequences are, of course, derived from previous experience;

that is, they are "remembered." But reflection short-circuits the process. The more deliberate and reflective the process of learning, the more the individual notes the connections between the things he does and the results he gets, the fewer repetitions will he need in order effectively to modify his instinctive behavior into useful habits. He will anticipate results; he will experience them in imagination. He will not need to make every wrong move in paddling a canoe until he finally hits upon the right one. He will not need to alienate all his clients before learning to deal with them successfully. In any given set of circumstances he will form the effective habits rapidly. He will calculate, "figure out," find out in advance. To keep one's temper under provocation, to refrain from eating delicious and indigestible foods, to keep at work when one would like to play, and sometimes to play when one is engrossed in work, are familiar instances of how our first impulses become checked, restrained, or modified in the light of the results we have discovered to be associated with them.

Reflective behavior modifies habit. The same conscious breaking-up of a new type of action into its significant features, the same connection of a given action with a given result which makes the intelligent learner so much more quickly acquire effective new habits than the one who is mechanically drilled, leads also to a continuous criticism of habits, and their discontinuance when they are no longer adequate. Reflection, if it is itself a habit, is the most valuable one of all. It is an important counterpoise to the hardening and fossilization which repeated habitual actions bring about in the nervous system.

In acting reflectively we subject our accustomed ways to deliberate analysis, however immediately persuasive these may have become, and deliberately institute new habits in the light of the more desirable consequences they will bring. Habits come to be regarded not as final or as good in themselves, but as methods of accomplishing good. If they fail

to bring genuine satisfaction, reflection can indicate wherein they are inadequate, wherein they may be changed, and whether they should be altogether discarded.

Reflection thus makes conduct conscious; it is not the substitute for instinct and habit; it is the guide and controller of both. When we act thoughtfully and intelligently, we are doing things not because we have done them that way in the past, or because it is the first response that occurs to us, but because, in the light of analysis, that way will bring about the most desirable results.

The limits of reflection as a modifier of instinct and habit. While our impulses and habits may be subjected to the criticism of reflection in the light of the consequences which it can forecast, reflection is itself seriously limited by our original impulses and our acquired habitual ones. On reflection, we may not follow our first impulse, but to act at all is to act on some original or acquired impulse or a combination of them. Which original tendency we shall follow reflection can tell us; it cannot tell us to follow none. In the illustration already used, the student may upon reflection study rather than go out. But the roots of his studying will also lie back in the instincts and habits which are, for better or for worse, his only equipment for action. They will lie back in the tendencies to be curious, to gain the praise of other people and to be a leader among them, in the habits of knowing work thoroughly, of studying in the evening, of maintaining a scholarship average to which he has been accustomed. Reflection may weigh the relative persuasions of various impulses; it cannot ignore them. We may think in order to attain our desires, and may, through reflection, learn to change them; we cannot abolish them. Whether we are curious about our neighbors' business or about the movements of the stars and the possible reactions of a strange chemical element, depends on our previous training and the extent to which inquiry itself has become a fixed and persistent habit. But in any case we are curious. Whether we

fight in street brawls or in campaigns against tuberculosis, we are still, as it were, born fighters.

Similarly, in the case of habit, we may upon reflection discover that our habits of walking, writing, or speech are bad; that we ought not to smoke, or drink, or waste time. We may come, through reflection, to realize with the utmost clarity the advantages to ourselves of acquiring the habits of going to bed early, saving money, keeping our papers in order, and persisting at work amid distractions. But the bad habits and the good are already fixed in our nervous system, and in physiology also possession is nine tenths of the law. We may *intend* to change, but by taking thought alone we cannot add a cubit to our stature. Reflection can do no more than point the way we should go. For unless the wrong actions are systematically and repeatedly refrained from, and the proper ones made habitual, thinking remains merely an impotent summary of what can be done. Conduct is governed, it must be repeated, by the satisfactions action can bring us, and unless actions are made habitual they will not be performed with satisfaction.

How instincts and habits impair the processes of reflection. It is as important as it is paradoxical that thinking is impaired in its efficiency by the instincts and habits in whose service it arises, and whose conflicts and maladjustments it helps to resolve. The situations of conflict or perplexity which provoke thinking are determined by the particular tendencies which, by nature or training, are brought into play in any given situation. If we are committed by tradition or habitual allegiance to a protective tariff, we will be concerned in our thinking with details, what articles need protection and how much do they need; the ultimate desirability of a protective tariff will not be a problem remotely occurring to us. If we are by training committed to capital punishment, we will be concerned, if we think about it at all, with means and methods; we will think about the relative merits of hanging or electrocution; the ultimate justification or desirability of cap-

ital punishment will not be a problem or issue for us at all. Thus, it may be said in a sense that our thinking is determined by what we do not think about as much as by what we do think about. What we take for granted limits the field within which we will inquire or reflect at all. But what we take for granted is, on the whole, settled by our habitual reactions. And the more settled habitual convictions we have, the narrower becomes the field within which reflection takes place. Force of habit may leave us blind to many situations genuinely demanding solution. Originality in thinking consists, in part at least, in an ability to see a problem where others, through routine, see none. Apples have fallen on the heads of others than Newton, but a habit-ridden rustic will not be stirred by the falling of an apple to reflection on the problem of falling bodies. The countryman may live all his life serenely oblivious to a thousand problems that would pique the curiosity and reflection of a botanist or geologist. A man may go on for years accepting income on investments earned in very dubious ways without ever pausing to reflect on the sources or the justification of his wealth.[1]

Instincts and habits, furthermore, limit the field of possible courses of action that suggest themselves. We come, through habit, to be alive only to certain possibilities to the practical exclusion of all others. Thinking becomes fruitful and suggestive when it is freed from the limited number of suggestions that occur through force of habit. But original thinking is rare precisely because habits do have such a compulsive power in determining the possibilities of action that suggest themselves to us. The man who moves in a rut of habitual reactions will "never think" of possibilities that "stare in the face" a less habit-ridden thinker. Inventiveness, originality,

[1] According to the traditional anecdote, when Marie Antoinette was told that the people were clamoring because they could not get any bread, the one problem that occurred to her was why they didn't eat cake. From the habits and conditions of life to which she was accustomed, there had never arisen a problem as to how to get food at all; it was merely a problem of what kind of food to eat.

creative intelligence, whatever one chooses to call it, consists, in no small measure, in this ability to remain alive to a wide variety of stimuli, to keep sensitive to all the possibilities that are in a situation, instead of those only to which we are immediately prompted by instinct or habit. The possibility of using the current of a river as power is not the first possibility that flowing water suggests.

Past training and individual differences in temperament not only limit the possibilities that do occur to us; they seriously distort, color, and qualify those of which we become conscious. We forecast differently and with differing degrees of accuracy the consequences of those possible courses of action which do occur to us according to the influence and stimulation which particular native traits and acquired impulses have in our conduct. Ideally, the consequences which we imaginatively forecast as following from a given course of action, should tally with the consequences which genuinely follow from it. But there is too often a sad discrepancy between the consequences as they are foreseen by the individual concerned and the genuine consequences that could be foreseen by any disinterested observer. The discrepancy between the genuine and the imagined consequences of given ideas or suggestions is caused more than anything else by the hopes, fears, aversions, and preferences which, by nature or training, are controlling in a man's behavior. Facts are weighed differently according as one or another of these psychological influences is present. We intend unconsciously to substitute a desired or expected consequence for the actual one; we tend to be oblivious to consequences which we fear, and quick to imagine those for which we hope. On the day before an election the campaign managers on both sides, in the glow and momentum of their activities, are confident of the morrow's victory. The opponent of prohibition saw nothing but drug fiends and revolution as its consequences; its extreme advocates saw it as the salvation of mankind.

The causes of error in appraising the consequences of any

given course of action are partly individual and partly social in character. From Francis Bacon down, there have been various attempts to classify these factors in the distortion of the reflective process. In connection with the particular human traits, especially such as fear and gregariousness, we shall have occasion to examine a few of these.

It will suffice to point out here that the aim of reflective thinking is to discover the genuine consequences of things, and to eliminate and discount those prejudices and preferences, bred of early education and training, which might impair our discovery of those consequences. To the untrained, those things look most significant which stir their impulses most strikingly. The beggar's sores seem much more important and terrible than a gifted youngster deprived of education through poverty. Instinctively we shrink back from the sight of blood, but instinct is no safe clue in helping us to distinguish between the poisons and the panaceas among the brightly colored bottles of chemicals ranged along a shelf. The whole technique of scientific method as opposed to the shrewd but unreliable guesses of common sense is one of freeing us from the compulsions of random habitual impulses. It substitutes for caprice the measuring of consequences, the detailed knowing of what we are about. That impartial judgment has its difficulties is clear from the simple fact alone that human beings start by being a bundle of instincts and soon grow into a bundle of habits. To the extent to which they can control these they are masters of themselves.

The value of reflection for life. To many people there is something terrifying about the idea of controlling life by reason. Life (they point out correctly) is a vital process of instincts which appear before thinking, and which are often more powerful than reasoned judgments. Against advice to live consciously, to be in control of ourselves, to know what we are about, comes the call "Back to Nature." A life of reflection appears chilling and arbitrary. Because reflection so often reveals that impulses must be checked if disaster

is not to result, it has come to be associated with a metallic and Stoic repression. To many a persuasive impulse we must, after reflection, say, "No." Because of this a certain school of philosophers, poets, and radicals urges us to trust nature, to follow our impulses, which, being natural, must be right.

All of these rebels against reason make the mistake of supposing that the aim of reflective thinking is to quell instincts, which, with the best will in the world, it cannot succeed in doing. Instincts are present and powerful. In themselves they are neither worth encouraging, nor ought they to be repressed. The satisfaction of native desires *is* what we want. The importance of reflective thinking is precisely that it helps us to secure those satisfactions. To surrender to every random impulse or every habitual prompting is to have neither satisfaction nor freedom. Reflection might be compared to the traffic policeman at the junction of two crowded thoroughfares. If every one were to drive his car pell-mell through the rush, if pedestrians, street cars, and automobiles were not to abide by the rules, no one would get anywhere, and the result would be perpetual accident and collision. In thinking we simply control and direct our impulses in the light of the consequences we can foresee. To thus guide and control action makes us genuinely free.

> If a man's actions are not guided by thoughtful conclusions, they are guided by inconsiderate impulse, unbalanced appetite, caprice, or the circumstances of the moment. To cultivate unhindered, unreflective external activity is to foster enslavement, for it leaves the person at the mercy of appetite, sense, and circumstance.[1]

Instincts and habits are fixed responses; being placed in such and such circumstances we *must* do such and such things. Only when we can vary our actions in the light of our own thinking are we masters of our environment rather than mechanically controlled by it.

The social importance of reflective behavior. Reflection

[1] Dewey: *How We Think*, p. 67.

in the life of the individual insures that he will not become the slave of his own habits. He will regard habits as methods to be followed when they produce good results, to be discarded or modified when they do not. But if habit in the life of the individual needs control lest it become dangerously controlling, it needs it more conspicuously still in the life of the group. Unless the individuals that compose a society are alert and conscious of the bearings of their actions, they will be completely and mechanically controlled by the customs to which they have been exposed in the early periods of their lives. What an individual regards as right or wrong, what he will cherish or champion in industry, government, and art, depends in large measure on his early education and training and on the opinions and beliefs of other people with whom he repeatedly comes in contact. A society may be democratic in its political form and still autocratic in fact if the majority of its citizens are merely machines which can be set off to respond in certain determinate ways to customary stimuli of names, leaders, and party slogans. A society becomes genuinely democratic, precisely to the extent to which there is on the part of its citizens participation in the important decisions affecting all their lives. But the participation will only be a formality if votes are decided and opinions formed on the basis of habit alone.

Reflection removed from immediate application — Science. Thus far thinking has been discussed in its more practical aspects. And thinking is in its origins a very practical matter. Literally, most people think when they have to, and only when they have to. Given a problem, a difficulty, a maladjustment between the individual and his environment, thinking occurs. If every instinctive act brought satisfaction, thinking would be much less necessary and much less frequently practiced. This is illustrated in the performance of any act that once required attention and discrimination, and has later become habitual. We do not think how to walk, eat, and spell familiar words, how to find our way about

familiar streets or even in familiar dark rooms. We *do* think about where we shall spend our evenings or our summer, which courses we shall choose at college, which profession we shall enter. Where we are uneasy, drawn by competing impulses, we consider alternatives, measure consequences, and choose our course of action in the light of the results we can forecast. But while a large proportion of reflective behavior is thus practical in its origins and its results, it also occurs not infrequently where there is no immediate problem to be solved. Not all of men's energies are concerned in purely practical concerns. And part of man's superfluous vitality is expended in disinterested and curious inquiry into problems whose solutions afford no immediate practical benefits, but in the mere solving of which man finds satisfaction.

From the dawn of history, when some man a little more curious than his fellows, a little less absorbed in the hunting, the food-getting, and the fighting which were in those early days man's chief imperative business, first began to observe the mysterious recurrences in the world about him, the rising and setting of the sun, the return of the seasons, the movements of the tides and the stars, there have been individuals born with a marked and sometimes a passionate desire to observe Nature and to generalize their observations. They have noted that, given certain conditions, certain results follow. They observe that animals with given similarities of form and structure have certain identical ways of life, that some substances are malleable and others not, that dew appears at certain times in the day on certain objects and not on others. They have generalized from these; and we now call such generalizations law. These generalizations when gathered into a system constitute a science.

The sciences started out with unconfirmed guesses based on not very accurate information. As man's methods became more precise, he controlled the conditions under which observations were made, and the conditions under which generali-

zations were drawn from them. The control of the conditions and methods of observation constitute what is known as induction in science. To this phase of the reflective process belong all the instruments for precise observation which characterize the scientific laboratory. The control of the methods by which generalizations or theories are built up from these facts is also part of the logic of induction, and includes all the canons and regulations for inductive inference.

But generalizations once made must be tested, and the elaboration of these generalizations, the analysis of them into their precise bearings, constitute that part of the process of reasoning known as deduction. The final verification is again inductive, an experimental corroboration of theories by the facts already at hand and by facts additionally sought out and observed.

(These processes will be discussed in detail in the chapter on "Science and Scientific Method.")

However complicated the process of inquiry may become, the sciences remain essentially man's mode of satisfying his disinterested curiosity about the world in which he is living. Through the sciences man makes himself, as has been so often said, at home in the world. He substitutes for the "blooming, buzzing confusion" which is the world as he first knows it, order, system, and law. Primitive man, absurd as seems to us his belief in a world of magic, of malicious demons and capricious gods, was trying to make sense out of the meaningless medley in which he seemed to find himself. Through science, modern man is likewise trying to make sense out of his world. The more apparently disconnected and incongruous facts that can be brought within the compass of simple and perfectly regular law, the less threatening or capricious seems the world in which we live. Where everything that happens is part of a system, we do not need, like the savage trembling in a thunderstorm, to be frightened at what will happen next. It is like moving in familiar surroundings among familiar people. Not all that goes on may be pleasant,

but we can within limits predict what will happen, and are not puzzled and pained by continuous shocks and surprises. We like order in the places in which we live, in our homes, in our cities, in the universe.

The sciences satisfy us not only in that they bring order into what at first seems the chaos of our surroundings, but in that they are themselves beautiful in their spaciousness and their simplicity. We cannot pause here to consider the physiological facts which make us admire symmetry, but it is fundamental in our appreciation of music, poetry, and the plastic arts. From the sciences, likewise, we derive the satisfaction of symmetry on a magnificent scale. There is beauty as of a great symphony in the sweep and movement of the solar system. There is a quiet and infinite splendor about the changeless and comparatively simple structure which physics, in the broadest sense, reveals beneath the seeming multiplicity and variety of things. It is a desire for beauty as well as a thoroughgoing scientific passion which prompts men like Poincaré and Karl Pearson to seek for one law, one formula which, like "one clear chord to reach the ears of God," expresses the whole universe.

The practical aspect of science. But while the origins of science may lie in man's thirst for system, simplicity, and beauty in the world, the tremendous advance of science has a more immediate and practical cause. To understand the laws of Nature means to have the power of prediction; it means to know that, given certain circumstances, certain others follow always and inevitably; it means to discover causes — and their effects. Man having attained through patient inquiry this capacity to tell in advance, may take advantage of it for his own good. The whole of modern industry with its phenomenal control of natural powers and resources is testimony to the use which man has found for the facts and laws which he would never have found out save for the curiosity which was his endowment and the inquiry which he made his habit. "Knowledge is power,"

said Francis Bacon, and the three hundred years of science that have made possible the whole modern world of electric transportation, air travel between two continents, and instantaneous communication between remote parts of the world, have proved the aphorism. Man since his origin has tried to control his environment for his own good. The cave and the flint were his first rude attempts. In science with its accurate observation of facts not apparent to the unaided eye, and its discovery and demonstration of laws not found by casual and unsystematic common sense, man has an incomparably more refined instrument, and an incomparably more effective one. Thus, paradoxically enough, man's most disinterested and impartial activity is at the same time his most practical asset.

The creation of beautiful objects and the expression of ideas and feelings in beautiful form. Most men spend most of their lives necessarily in practical activity. Man's particular equipment of instincts survived in "the struggle for existence" precisely because they were practical, because they did help the human creature to maintain his equilibrium in a half-friendly, half-hostile environment. Man acquires also, as already has been pointed out, habits that are useful to him, that bring him satisfactions not attainable through the random instinctive responses which are his at birth. Reflection, too, is, for the most part, severely practical in its origins and its responsibilities. It guides action into economical and useful channels.

Most of man's actions are thus ways of modifying his environment for immediately practical purposes. Man has instincts and habits which enable him to live. But in making those changes in the world which enable him to live better, man, as it were by accident, makes them beautifully. Pottery begins, for example, as a practical art, but the skilled potter cannot help spending a little excess vitality and habitual skill in adding a quite unnecessarily graceful curve, a gratuitous decoration to the utilitarian vessel he is making.

In the words of Santayana, "What had to be done was, by imaginative races, done imaginatively; what had to be spoken or made was spoken or made fitly, lovingly, beautifully. . . . The ceaseless experimentation and fermentation of ideas, in breeding what it had a propensity to breed, came sometimes on figments that gave it delightful pause." [1]

These accidental graces that man makes in the instinctive and habitual control to which he subjects his environment become the most cherished values of his experience. Men may first have come to speak poetry accidentally, for language arose, like other human habits, as a thing of use. But the charming and delightful expression of feelings and ideas came to be cherished in themselves, so that what was first an accident in man's life, may become a deliberate practice. When this creation of beautiful objects, or the beautiful expression of feelings or ideas is intentional, we call it art. In such intentional creation and cherishing of the beautiful man's life becomes enriched and emancipated. He learns not only to live, but to live beautifully.

In such activity men, as has been recognized by social reformers from Plato to Bertrand Russell, are genuinely happy, and there alone find freedom. For in the creation of beauty man is not performing actions because he must, under the brutal compulsion of keeping alive. He is acting simply because action is delightful both in the process and in the result. Whether in business, politics, or scholarship, men are happy to the extent to which they have the sense of creation that is peculiarly the artist's.

The products of art, moreover, are not desirable because they bring other goods, but because they themselves are intrinsically delightful. Men love to live in a world in which their marble has been made into statues, in which their houses are things of beauty rather than merely places in which to live. Their lives are enriched by living in a society where the thoughts and emotions which they communicate to one

[1] Santayana: *Reason in Art*, p. 16.

another and which they must somehow express can be not infrequently expressed with nobility and music. Through science Nature becomes man's tool; through art it can become a beautiful instrument to work with, and a lovely thing in and for itself.

CHAPTER IV

THE BASIC HUMAN ACTIVITIES

Food, shelter, and sex. Thus far our analysis has been confined to the general types of human behavior. We have found that all human activity is conditioned by a native equipment consisting of certain more or less specific tendencies to action, and that these may be modified into acquired tendencies called "habits." We have found that through the processes of reflection, through imaginative trial and error, both of these may, within limits, be controlled. We must now proceed to an inventory of those elements of our native equipment which have an especial significance in social life.

In the first place, we must note the three great primary drives of human action, the unlearned and native demands for food, shelter, and sex gratification.[1] Although the last-named does not display itself in human beings until a considerable degree of maturity has been attained there is indubitable evidence that it is an inborn and not an acquired reaction. The practical utility of the first two is apparent; they are the most essential features of the group of so-called self-preservative instincts, among which may be grouped the natural tendency to recover one's equilibrium and the instinct of flight in the face of dangerous or threatening objects. The utility of the sex instinct is racial rather than individual. The instinctive satisfaction human beings find in sex gratification is the natural guarantee of the continuance of the race.

In a general survey of this nature it is impossible, as it is

[1] The reader must be reminded that the simpler reflexes involved in the use of the heart, lungs, intestines, and all the internal organs, must be classed as part of man's native equipment. They differ from those reactions commonly classed as instincts in that they are simpler and stabler, that in their normal functioning they never rise to consciousness, and that they are almost completely beyond the individual's modification or control.

unnecessary, to examine in detail the physiological elements of the demand for food and shelter. It will suffice to point out that the first two are the ultimate biological bases of a large proportion of our economic activities. They are primary, not in the sense that they are constantly conscious motives to action, but that their fulfillment is prerequisite to the continuance of any of the other activities of the organism. Agriculture and manufacture, the complicated systems of credit and exchange which human beings have devised, are, for the most part, contrivances for the fulfillment of these fundamental demands. With the complexity of civilization new demands, of course, arise, but these fundamental necessities are still the ultimate mainsprings of economic production.

The demand for sex gratification, because of its enormous driving force and the emotional disturbances connected with it, offers a peculiarly acute instance of the difficulties brought about in the control of man's native endowment in his own best interest. While the production of offspring is its chief biological utility, satisfaction of the sex instinct itself is stimulated in human beings quite apart from considerations of the desirability or undesirability of offspring. Since the sex instinct is at once so deep-rooted and intense a driving force in human action, and its consequences of such crucial importance to both those directly involved and to the group as a whole, societies have, through law and custom and tradition, built up elaborate codes for its control. In civilized society the free operation of this instinct is checked in a thousand ways. But, as in the case of other primitive motives to action, the sex instinct, obvious as are the disasters of disease and disorganization which follow as consequences of its uncontrolled indulgence, cannot altogether be repressed.

It is generally recognized that in men and animals alike the sex impulse is apt to manifest itself in very vigorous and sustained efforts toward its natural end; and that in ourselves it may determine very strong desires, in the control of which all the organized forces of the developed personality, all our moral sentiments and

ideals, and all the restraining influences of religion, law, custom and convention too often are confronted with a task beyond their strength.[1]

There is considerable agreement among students of the subject that the emotional energies aroused in connection with the sex instinct may be drained off into other channels, and serve to quicken and sustain both artistic creation and appreciation and social and religious enthusiasms of various kinds. And the sex instinct, as we shall find in our discussion of Racial Continuity (see p. 243) is the basis of the family.

Physical activity. The difference between sticks and stones and living beings consists primarily in the fact that the latter are positively active; the former are passively acted upon. The stone will stay put, unless moved by some external agent, but even the amœba will do something to its environment. It will stretch out pseudopodia to reach solid objects to which to cling; it will attempt to return to these objects when dislodged; it will actively absorb food. Higher up in the animal scale, "Rats run about, smell, dig, or gnaw, without real reference to the business in hand. In the same way Jack (a dog) scrabbles and jumps, the kitten wanders and picks, the otter slips about everywhere like ground lightning, the elephant fumbles ceaselessly, the monkey pulls things about." [2] "The most casual notice of the activities of a young child reveals a ceaseless display of exploring and testing activity. Objects are sucked, fingered and thumped; drawn and pushed, handled and thrown." [3]

When vitality is at its height in the waking period of a young child, its environment is a succession of stimulations to activity. Man's "innate tendency to fool" is notorious, a tendency particularly noticeable in children. Objects are responded to, not as means to ends, not with reference to their use, but simply for the sheer satisfaction of manipulation.

[1] McDougall: *Social Psychology*, 11th ed., pp. 399–400.
[2] Hobhouse: *Mind in Evolution*, p. 195.
[3] Dewey: *How We Think*, p. 31.

Facial expressions, sounds, gestures, are made almost on any provocation; they are the expressions of an abundant "physiological uneasiness." The two-year-old is a mechanism that simply must and will move about, make all kinds of superfluous gestures and facial expressions, and random sounds, as it were, just to get rid of its stored-up energy. Man's laziness and inertia are not infrequently commented on by moralists, but it is not laziness and inertia *per se;* certainly in normal individuals in the temperate zone, to do *something* most of their waking time is a natural tendency and one intrinsically pleasant to practice. That the tendency to be active should vary in different individuals and at different times is, of course, as important a fact as it is a familiar one. Some of the causes of this variation will be noted in the succeeding.

In adult life for casual and random activity is substituted activity directed by some end or purpose which determines the responses called into play. Professional and business, domestic and social enterprises and obligations take up most of the adult's energy. The contrast between the play of the child and the work of the adult is that in the case of the former actions are done for their own sake; and in the latter for some end. The child, we say, plays "for the fun of the thing," the adult works for pay, for professional success, for power, reputation, etc.

But even in the adult the desire for play powerfully persists. Not all the grown-up's energy is absorbed in his work, and even some types of work, like that of the poet or painter, or the building-up of a great business organization, may be intrinsically delightful and self-sufficient activity. Under the conditions of modern industry, however, especially of machine production, much — in many cases, most — of the activity by which an individual earns his living, utilizes only some of his native tendencies to act, while the working day does not, under normal conditions, absorb all his energy. Whatever vitality is not, therefore, absorbed in necessary work goes into forms of purely gratuitous activity. Which form "play"

shall take in the adult depends on the degree to which certain impulses are in him stronger than others, either by native endowment or cultivation, and which impulses have not been sufficiently utilized in him during the day's work. A man musically gifted will find his recreation in some performance on a musical instrument, let us say; on the other hand, if his work is music, those impulses, strong though they be, that make him a musician, will have been sufficiently exhausted in the day's work to make some other activity a more satisfactory recreation.

The relations between play and work can be better understood by a consideration of the physiological importance of variety in activity. A certain regular recurrence of response may be pleasant, as in rowing or canoeing, or in listening to the rhythms of poetry or music, but a prolonged repetition of precisely the same stimulus or the same set of stimuli may make responses dissatisfying to the degree of pain. Ideal activity, biologically, would be one where every impulse was just sufficiently frequently called upon to make response easy, fluent, and satisfactory.

The reason "work" has traditionally come to be regarded as unpleasant and "play" as pleasant is not because the former is activity and the second is torpor. Leisure does not necessarily mean laziness. Many a vacation, a camping party, a walking expedition, is literally more strenuous than the work an individual normally does. But work means human energy expended for the sole purpose of accomplishing some end. And an end involves the deliberate shutting-out of every impulse which does not contribute to its fulfillment. A man weeding a garden may tire of the weeding long before he is really physically exhausted. One response is being repeatedly made, while at the same time a dozen other impulses are being stimulated. When Tom Sawyer, under the compulsion of his aunt, is whitewashing a fence, it is shortly no fun for him. But he can make other boys pay him apple-cores and jackknives for the fun of wielding the brush.

What we call the feeling of boredom depends principally upon the too repeated stimulation of one set of activities to the exclusion of all others, the continuous presence of a kind of stimulation to which we have been rendered unsusceptible, as, for example, bad popular music to a cultivated musical taste, or intricate chamber music to an uncultivated one. The feeling of boredom may become physiologically acute, as in the case, so frequent in machine production, of literally monotonous or one-operation jobs. Long hours of labor at acts calling out only one very simple response may have very serious effects. In the first place, in the work itself, since repetitions of one or one simple set of responses may impair speed and accuracy. On the part of the worker, it promotes varying degrees of stupefaction or irritation. Excesses of drink, gambling, and dissipation among factory populations are often traceable to this continual frustration of normal instincts during working hours, followed by a violent search for stimulation and relaxation after work is over. Under conditions of machine production, the responses which the worker must make are becoming increasingly simple and automatic. Hence the problem of bringing variety into work and something of the same vitality and spontaneity into industry that goes into play and art is becoming serious and urgent.[1]

Mental activity. Just as physical activity is a characteristic of all living beings, so, from almost earliest infancy of human beings, is mental activity. This does not mean that individuals from their babyhood are continually solving problems. Deliberation and reflection are simply the mature and disciplined control of what goes on during all of our waking hours — random play of the fancy, imagination. We are not always controlling our thought, but so long as we are awake something is, as we say, passing through our heads. Everything that happens about us provokes some suggestion or idea. "Day-dreaming, building of castles in the air, that loose flux of casual and disconnected material that floats through our

[1] See Helen Marot: *Creative Impulse in Industry.*

minds in relaxed moments, are, in this random sense, *thinking*. More of our waking life than we should care to admit, even to ourselves, is likely to be whiled away in this inconsequential trifling with idle fancy and unsubstantial hope." [1]

This play of the imagination is most uncontrolled and spontaneous in childhood, which is often characteristically defined as the period of make-believe or fancy. It is this capacity which enables the child to use chairs as locomotives, sticks as rifles, and wheelbarrows as automobiles. As we grow older we tend to discipline this vagrant dreaming, and to draw only those suggestions from objects which tally with the workaday world we live in. We stop playing with our imagination and put our minds to work. But in adult life desire for the play of the mind, like the desire for the play of the body, persists. The endeavor of education is not to crush but to control it.

Imagination, used here in the sense of random mental activity, may be controlled in two ways, both significant for human welfare. When it is controlled with reference to some emotional theme, as in fiction, drama, and poetry, it has no reference necessarily to actual objects or events; it is concerned only with producing the effect of emotional congruity between incidents, objects, forms, or sounds. A great novel does not pretend to be a literal transcript of experience, nor a portrait of an actual person. When random mental activity is thus controlled, it is "imagination," in the popular sense, the sense in which poets, painters, and dramatists are called imaginative artists.

Imagination controlled with reference to facts produces genuine reflection and science. To put it in another way, no matter how complicated thinking becomes, no matter how suggestions are examined and regulated with reference to the facts at hand, new ideas, theories, and hypotheses occur to the thinker precisely by this upshoot of irresponsible fancies and suggestions. This free and fertile play of the imagina-

[1] Dewey: *How We Think*, p. 2.

tion is what characterizes the original thinker more than any other single fact. Suggestions arise, as it were, willy-nilly, depending on an individual's inheritance, his past experience, his social position, all at the moment uncontrollable features of his situation. We can, through scientific method, examine and regulate suggestions once they arise, but their appearance is in a sense casual and unpredictable, like the fancies in a day-dream. The greatest scientific discoveries have been made in a sudden "flash of imagination," as when to the mind of Darwin, after twenty years' painstaking collection of facts, their explanation through the single encompassing formula of evolution occurs, or when to the mind of Newton the hypothesis of gravitation suddenly suggests itself.

The encouragement of a lively play of the mind over experience, the stimulation of imagination or what Bertrand Russell calls "the joy of mental adventure" is thus one of the most important sources of art and science. The arousing of imagination depends primarily on the inherited curiosity of man which varies from the random and restless exploring of the child to the careful and persistent investigation of the trained scientist. The curiosity which prompts the child to experiment with objects in a hit-or-miss fashion is little more than the physiological overflow of action which has been noted above.

Curiosity becomes more distinctively mental when it is social in character, when the child explores and experiments not by its own manipulations but by communication, by asking questions of other people.

When the child learns that he can appeal to others to eke out his store of experiences, so that, if objects fail to respond interestingly to his experiments, he may call upon persons to provide interesting material, a new epoch sets in. "What is that?" "Why?" become the unfailing signs of a child's presence. At first this questioning is hardly more than a projection into social relations of the physical overflow which earlier kept the child pushing and pulling, opening and shutting. He asks in succession what holds up the house, what holds up the soil that holds the house, what holds up the earth that

holds the soil; but his questions are not evidence of any genuine consciousness of rational connections. His *why* is not a demand for scientific explanation; the motive behind it is simply eagerness for a larger acquaintance with the mysterious world in which he is placed. The search is not for a law or principle, but only for a bigger fact. . . . But in the feeling, however dim, that the facts which directly meet the sense are not the whole story, that there is more behind them and more to come from them, lies the germ of *intellectual* curiosity.[1]

Curiosity passes thus from casual rudimentary inquiry into genuinely scientific investigation. At first it is merely physical manipulation, then merely disconnected questionings; it becomes genuinely intellectual when it passes from "inquisitiveness" to inquiry. To be inquisitive means merely to want to know facts rather than to solve problems. To be scientifically inquiring is to seek on one's own account the significant relations between things. But these earlier and more casual forms of curiosity are not to be despised. If developed and controlled they lead to genuinely disinterested study of Nature and of men, to the spirit and the methods of science. That free play of imagination which was spoken of above as the chief source of original thinking and discovery is stimulated by an active hunting-out of new suggestions. Curiosity might also be defined as aggressive imagination, which, frequent enough in children, remains among adults to a pronounced degree only in geniuses of art and science. We may not agree with Bertrand Russell that "everything is done in education to kill it," but the dogmatism and fixity of mind which so soon settle down on maturity, the inability to be sensitive to new experiences, these are discouragingly familiar phenomena clearly inimical to science and to progress.

An active imagination that finds new materials to play over is the basis of both science and art. A skillful manipulation of its materials in words or sounds, colors, or lines makes its result art. Their controlled examination and systematization makes them science.

[1] Dewey: *loc. cit.*, p. 32.

Quiescence — Fatigue. That all life, animal and human, is characterized by activity of a more or less persistent and positive kind has already been noted. But in human beings, as well as in animals, activity displays a "fatigue curve." The repeated stimulation of certain muscles produces fatigue toxins which impair the efficiency of response and make further stimulation painful. Of the causes of this lessened functional efficiency we may quote from Miss Goldmark's painstaking study:

> During activity, as will be shown later, the products of chemical change increase. A tired person is literally and actually a poisoned person — poisoned by his own waste products. But so marvellously is the body constructed that, like a running stream, it purifies itself, and during repose these toxic impurities are normally burned up by the oxygen brought by the blood, excreted by the kidneys, destroyed in the liver, or eliminated from the body through the lungs. So rest repaires fatigue.[1]

In physical activity, therefore, periods of lessened activity or change of activity, or nearly complete inactivity as in sleep, are not only desirable but necessary, if efficiency is to be maintained. The demand for rest is an imperative physiological demand. The amount of recuperation demanded by the organism varies in different individuals, but that there are certain limits of human productivity has been made increasingly clear by a careful study of the effects of fatigue upon output in industrial occupations. Repeatedly, the shortening of working hours, especially when they have previously numbered more than eight, has been found to be correlated with an increase in efficiency. Likewise, the provision of rest periods as in telephone-operating and the needle trades, has in nearly every case increased the amount and quality of the work performed. The human machine in order to be most effective cannot be pressed too hard. A striking illustration was offered in England at the beginning of the war. Under pressure of war necessity, the munition factories relaxed all

[1] Goldmark, J.: *Fatigue and Efficiency*, p. 13.

restrictions on working hours and operated on a seven-day week. The folly of this procedure was tersely summarized by the British Commission investigating industrial fatigue, which reported: "It is almost a commonplace that seven days' labor produces six days' output."

In the study of industrial conditions, the effects of prolonged and repeated fatigue upon output have not been the only features taken into consideration. Not only are there immediately observable effects in the decreased output of the worker, but fatigue means, among other things, general loss of control. This has the effect of producing on the part of overworked factory hands dissipation and overstimulation in free time, with a consequent permanent impairment of efficiency.[1] Both for the laborer himself and for the efficiency of the industrial system, it has been increasingly recognized that limitation of working hours is imperatively demanded. Rest is as fundamental a need as food, and its deprivation almost as serious in its effects.

Nervous and mental fatigue. The conditions of nervous and mental fatigue have been less adequately studied than the types of purely physiological fatigue just discussed. It is difficult in experiments to discount the effects of muscular fatigue, and to discover how far there is really impairment of nervous tissue and functions. Experimental studies do show that "nervous fatigue is an undoubted fact" [2] and that "we cannot deny fatigue to the psychic centers" [3] which, like any other part of the organism are subject to deterioration by fatigue toxins. Most students report, however, a higher degree of resistance to fatigue in the nerve fibers than in the muscles, and a like high resistance to fatigue in the brain centers.[4]

[1] For a striking array of testimony on this point see Goldmark: *loc. cit.*, pp. 220–35.

[2] Frederick S. Lee: "Physical Exercise from the Standpoint of Physiology," *Science*, N.S., vol. xxix, no. 744, p. 525.

[3] Lee: *Fatigue*. Harvey Lectures, 1905–06, p. 180.

[4] For a summary of nervous fatigue and extensive bibliography, see Goldmark: *loc. cit.*, p. 32.

The conditions of mental fatigue, however, can be by no means as simply described as those of physical fatigue. Elaborate experiments by Professor Thorndike and others tend to show that, in the strictest sense of the term, there is no such thing as mental fatigue. That is, any mental function may be performed for several hours with the most negligible decrease in the efficiency of the results attained. The subject of one experiment kept continuously for seven hours performing mental multiplications of four-place numbers by four-place numbers with scarcely any perceptible decrease in speed or accuracy in results.[1] Professor Thorndike draws from this and similar experiments the conclusion that it is practically impossible to impair the efficiency of any mental function as such. What happens when we say our mental efficiency is being impaired is rather that we *will not* than that we *cannot* perform any given mental function. The causes of loss of efficiency are rather competing impulses [2] than fatigue in specific mental functions. We are tired *of* the work, not *by* it. Continuous mental work of any given kind, writing a book, solving problems in calculus, translating French, etc., involves our being withheld from other activities, games, music, or companionship, to which by force of habit or instinct, we are diverted, and diverted more acutely the more we remain at a fixed task. That it is not mental "fatigue" so much as distraction that prevents us from persisting at work is evidenced in the longer time we can stick to work that really interests us than to tasks in which we have only a perfunctory or compulsory interest. The college student who is "too dead tired" to stay up studying trigonometry will, though in the same condition, stay up studying football strategy, rehearsing for a varsity show, or getting out the next morning's edition of his college paper. "If each man did the mental work for which he was fit, and which he enjoyed, men would work willingly much longer than they now

[1] T. Arai: *Mental Fatigue.*
[2] Thorndike: *Educational Psychology*, Briefer Course, p. 322.

do." [1] The effects of mental fatigue are, when analyzed, due chiefly to the physically injurious effects that do, but do not necessarily, accompany mental work.

> Proper air and light, proper posture and physical exercise, enough food and sleep, and work whose purpose is rational, whose difficulty is adapted to one's powers, and whose rewards are just, should be tried before recourse to the abandonment of work itself. It is indeed doubtful if sheer rest is the appropriate remedy for a hundredth part of the injuries that result from mental work in our present irrational conduct of it.[2]

The study of the conditions of mental work seems to reveal, in brief, that the conditions of fatigue are essentially physical in character. Given adequate physical conditions, in particular guarding against eye-strain, over-excitement (which means distraction from the work in hand), and loss of sleep, mental work is itself peculiarly unaffected by fatigue conditions. The degree in which mental work can be persisted in depends, therefore, other things being equal, on the individual's own interests, the number and intensity of rival interests which persist during a given piece of mental work, and the habits of mind with which the individual approaches his work.

The experimental demonstration that so-called mental fatigue is largely physical in its conditions has thus a dual significance. It indicates how arduous and persistent mental endeavor may be and how wide are the possibilities of intellectual accomplishment. It is an important fact for human life that the brain is possibly the most tireless part of the human machine. What seems to be mental fatigue can be materially reduced if the physical conditions under which studying, writing, and all other kinds of mental work are performed are carefully regulated. Another large part of what passes for mental fatigue will be removed if the individual becomes trained to a reflective appreciation of the end of his work. A habit of alert and conscious attention, if it is really habitual,

[1] Thorndike: *Educational Psychology*, Briefer Course, p. 326.
[2] *Ibid.*, p. 328.

will enable one to persist at work in the face of tempting distractions. Learning to "tend to business" by an intelligent application to the aims of the work to be done, will be a healthy antidote against that yielding to every dissuading impulse which so often passes for mental weariness.

CHAPTER V

THE SOCIAL NATURE OF MAN

Man as a social being. Man has long been defined as the "social animal," and it is certainly characteristic of human activity that it takes place largely with reference to other people. Many of man's native tendencies, such as those of sex, self-assertiveness, and the like, require the presence and contact of other people for their operation. Nineteenth-century philosophers attempted frequently to explain how individuals who were natively self-seeking ever came to act socially. The solution to this problem was usually found in the fact that precisely those self-seeking and self-preservation instincts which governed man's activity could not find satisfaction except through coöperation with a group. All man's social activity was conceived as purely instrumental to the gratification of his own egoistic desires. Man got on with his fellows simply because he could not get on without them. We shall see that, in the light of the specific and natural tendencies toward social behavior which are part of man's original equipment, this sharp psychological isolation between the individual and the group is an altogether unwarranted assumption. For it is just as native to man to act socially as it is for him to be hungry, or curious, or afraid. The element of truth in the nineteenth-century exaggeration of man's individuality lies in the fact that social activity is partly brought about in the satisfaction of the more egoistic impulses of the individual. "The fear motive drives men together in times of insecurity; the pugnacity motive bands them together for group combat; the economic motive brings industrial coöperation and organization; the self-assertive and submissive tendencies bring emulation as well as obedience; the expansion of the self to cover one's family, one's clique, one's class, one's country contrib-

utes to loyalty; while the parental instinct, expanding its scope to cover others besides children who are helpless, leads to self-sacrifice and altruism." [1]

The fact is, however, that while social activity is promoted because individuals find in coöperation the possibility of the satisfaction of their egoistic desires, social activity is primarily brought about through the specifically social tendencies which are part of our native equipment. It is with these natural bases of social activity that we shall in this chapter be particularly concerned. We shall have to take note, in the first place, of a native tendency to be with other people, to feel an unlearned sense of comfort in their presence, and uneasiness if too much separated from them, physically, or in action, feeling, or thought. Human beings tend, furthermore, to reproduce sympathetically the emotions of others, especially those of their own social and economic groups. Thirdly, man's conduct is natively social in that he is by nature specifically sensitive to praise and blame, that he will modify his conduct so as to secure the one and avoid the other. Finally, besides the specific tendencies to respond to the presence, the feelings, the actions, and the thoughts of others, man displays a "capacity for social behavior." And, as is the case with all native capacities, man has, therefore, a native interest in group or social activity for its own sake.

The predominantly social character of human behavior has thus a twofold explanation. It is based, in the first place, on the group of native tendencies of a social character to which we have already referred. It is based, secondly, on the necessity for group activity and coöperation which the individual experiences in the satisfaction of his egoistic impulses and desires. Man, because of his original tendencies, wants to live, act, think, and feel with others; for the satisfaction of his non-social impulses he must live with others. And in civilized society human action from almost earliest childhood is in, and with reference to, a group. Human behavior is thus seen to

[1] R. S. Woodworth: *Dynamic Psychology*, p. 204.

be that of an essentially social nature acting in an essentially social environment. And, as in the case of other instinctive and habitual activities, human beings experience in social activity an immediate satisfaction apart from any satisfactions toward which it may be the instrument.

Gregariousness. The "herd instinct" is manifested by many animals very low in the scale of animal development. McDougall quotes in this connection Francis Galton's classical account of this instinct in its crudest form: "Describing the South African ox in Damaraland, he says he displays no affection for his fellows, and hardly seems to notice their existence, so long as he is among them; but, if he becomes separated from the herd, he displays an extreme distress that will not let him rest until he succeeds in rejoining it, when he hastens to bury himself in the midst of it, seeking the closest possible contact with the bodies of his fellows." [1]

This original tendency exhibits itself among human beings in a variety of ways. The tendency of human beings to herd together, for which there is evidence in the earliest history of the race, may be observed on any crowded thoroughfare, or in any amusement park, or city. That group life has expanded partly through practical necessity, is, of course, true, but groups of humans tend to become, as in our monster cities, larger than they need be, or can be for economic efficiency.

The fascination of city life has not infrequently been set down to the multiplicity of opportunities offered in the way of companions, amusements, and occupations after one's own taste. But the fascination has clearly a more instinctive basis, the desire to be with other people. Many a man, as has been pointed out, lives in a large city as unsociable and secluded a life as if he were surrounded by miles of mountain or prairie, who yet could not be happy elsewhere. Any one who has failed to be amused by a really good comedy when the theater was comparatively empty, or in the presence of thousands of others hugely enjoyed a second-rate baseball

[1] McDougall: *Social Psychology*, p. 84.

game, or gone down to the crowded shopping district to get what he could have purchased on a side-street uptown, can appreciate how instinctive is this undiscriminating desire for companionship.

The native intensity of this desire is what makes rural isolation, on the other hand, so unsatisfactory. The bleakness of New England country life as pictured in Edith Wharton's *Ethan Frome*, or in some of Robert Frost's *North of Boston*, is due more than anything else to this privation from companionship. Perhaps nothing better could be said for the rural telephone, the interurban trolley, and the cheap automobile than that they make possible the fulfillment of this normal human longing to be near and with other people in body and spirit. The horror which makes it practically impossible in civilized countries to legalize punishment by solitary confinement and the nervous collapse which such confinement brings about are indications of how deep-seated is this desire.

The "herd instinct," like all the other of man's original tendencies, is educable. It can be trained to respond to groups of various sizes and kinds. In its simplest manifestation it tends to be aroused by the family, but in the history of civilization the group tends progressively to enlarge. The family, the town, the nation — the gregarious instinct may be educated to respond to these ever-widening groups. The intensity and controlling power of this instinct over our actions seems to vary with the degree of intimacy and intercommunication between the individual and the group. In primitive society it is most intense among the family and clan, and the family still remains in civilized society, certainly in rural districts, a very closely knit primary group. But as intercommunication widens, a sense of attachment to and solidarity with a larger group begins to make itself felt. That intercommunication is largely important in extending the group in response to which the herd instinct may be aroused, is well illustrated by the utter lack of national group feeling

exhibited during the Great War by recruits drafted from the backwoods districts where they had been tied by no railroads or newspapers to the national civilization of which they were a part.

The devotion of generous-hearted souls to "lost causes," whether political or religious, of the individual to his family or friends in the face of personal privation, are classic illustrations of the power of men's gregarious instinct even in the face of the dictates of reason. In the perhaps extreme but nevertheless suggestive statement of Mr. Trotter:

> He [man] is more sensitive to the voice of the herd than to any other influence. It can inhibit or stimulate his thought and conduct. It is the source of his moral codes, of the sanctions of his ethics and philosophy. It can endow him with energy, courage and endurance, and can as easily take these away. It can make him acquiesce in his own punishment, and embrace his executioner, submit to poverty, bow to tyranny, and sink without complaint under starvation. Not merely can it make him accept hardship and suffering unresistingly, but it can make him accept as truth the explanation that his perfectly preventable afflictions are sublimely just and gentle. It is this acme of the power of herd suggestion that is perhaps the most absolutely incontestable proof of the profoundly gregarious nature of man.[1]

To how large a group the individual can respond with spontaneous and instinctive loyalty is questionable. The small child throws out his arms and exclaims passionately, "I love the whole world." Auguste Comte could be imbued with a fervor for "humanity" in the abstract. The idea of a League of Nations arouses in some minds a passionate devotion to a world order that to those themselves habituated to an intense loyalty to the national group seems incredible. Certainly it is true that we rapidly outgrow that state of mind common to enthusiastic adolescence when we can develop a love for the universe in the abstract. The instinct of gregariousness seems unquestionably to be most intense where there is intimacy and vividness of group association. The primary

[1] Trotter: *Instincts of the Herd in Peace and War*, pp. 114–15.

groups, as Professor Ross calls them, are face-to-face associations, the family, the play group, the neighborhood group. If "world patriotism" is a possibility, it is because rapid communication and the frequency of travel, and the education of the industrial classes to "the international mind" tend to break down barriers and to make distant countries and persons vivid and directly imaginable. But there seems to be no substitute for direct personal contact. Even devotion to a country tends to take the form of phrases, places, persons, and symbols, to which we have been familiarized.

Gregariousness important for social solidarity. The gregarious instinct, powerful as it is, is of the greatest significance for social solidarity, and, if misdirected, for seriously limiting it. It is, in the first place, the trait without which social solidarity would be almost impossible. "In early times when population was scanty, it must have played an important part in social evolution by keeping men together, and thereby occasioning the need for social laws and institutions." [1] The coherence of national, political, or religious groups depends primarily on the extent to which the gregarious instinct may be aroused. Allegiance to a group may, of course, be secured through participation in common ideals. This is illustrated in the case of the numerous literary and scientific associations that cut across national boundaries and knit into groups similarly interested persons all over the world. Groups may, again, be formed through common economic interests, as in the case of labor unions, or employers' associations. Groups may be knit and strengthened through law and custom. And all these factors play a smaller or larger part in any important grouping of men in contemporary society. But unless there is, on the part of the members of the group, a deep-seated emotional attachment to the group itself, solidarity will be very precarious. The intensity and solidarity of feeling exhibited so markedly during war-time is made possible by the intense excitability of this instinct when the group is

[1] McDougall: *Social Psychology*, p. 301.

under conditions of stress or danger. Any scheme for enlisting a great number of individuals in modern society in a scheme of social reform or improvement, must and does, when it is successful, arouse in him a heightened sense of loyalty to a group more than reasoned approval of a cause. Effective recruiting posters more often told the passer-by, "Your country needs you," than they attempted to convince him in black-and-white logic of the justice of his country's aims.

Gregariousness may hinder the solidarity of large groups. While gregariousness is the foundation of group solidarity, it also interferes with the solidarity of large groups, and not infrequently brings about conflicts between them, and within groups themselves. Within even so small a community as a college class, cliques may form; and so in a country, attachment to the smaller group may inhibit attachment to the larger. An individual may be vaguely patriotic, but instinctively aroused more by his own economic or local or racial group than by the country as a whole. A man may at heart be more devoted to his town or home than to the United States. (Not infrequently his town or home is what the United States means to the citizen.) Even to-day the sectional feeling that exists in many parts of the country cannot be completely explained as occurring through separate economic interests. The division of classes within a country is largely an economic matter, but even in such a situation a loyalty develops to the class as a class or group.

Again, the same instinct to herd with his fellows that makes a man intensely loyal to his own group may operate to make him indifferent to the difficulties or jealous and suspicious of the aims of others Gregariousness is the basis not only of patriotism, but of chauvinism, not only of civic pride, but of provincialism. The narrowness and parochialism of group attachments is most pronounced where groups and communities are rigidly set off one from another. In such circumstances community of feeling and understanding is largely reduced.

This may be seen even under contemporary conditions in the comparatively complete inability of different professional, social, and economic groups within the same society to understand each other, and the proverbial ignorance and carelessness of one half of the population as to "how the other half lives." Narrowness of group feeling tends to grow less pronounced under the mobile conditions of modern industry, communication, and education. Trade relations knit the farthest parts of the globe together; this morning's newspaper puts us in touch with the whole of mankind. We have outgrown the days when every stranger was an enemy. But though the barriers between nations are tending to break down, within nations individuals tend, as they grow older, to experience an insulated devotion to their own set or social group, a callous oblivion to the needs and desires of that great majority of mankind with whom they have a less keen sense of "consciousness of kind."

Gregariousness in belief. Man's gregarious character, as already pointed out, is manifested not only in his desire to be physically with his fellows, but to be at one with them in their actions, feelings, and thoughts. Beliefs once established tend to remain established if for no other reason than that they are believed in by the majority. That an opinion gains prestige merely because we know other people believe it, is frequently illustrated by the facility with which rumor travels. At the end of the Great War, it will be recalled, the false news of the armistice report flew from mouth to mouth and was accepted with the most amazing credulity simply because "everybody said so." The spread of superstitions and old wives' tales and their long lingering in the minds even of intelligent people is testimony that men tend mentally as well as physically to herd together.

The tendency to find comfort in the presence of one's fellows and uneasiness if too much separated from them, is as pronounced in the sphere of moral and intellectual relations as it is in the case of merely physical proximity. We like to

be one of a crowd in our opinions and beliefs, as well as in our persons. There is hardly anything more painful than the sense of being utterly alone in one's opinions. Even the extreme dissenter from the accustomed ways of thinking and feeling of the majority is associated with or pictures some little group which agrees with him. And, if we cannot find contemporaries to share our extreme opinions, we at least imagine some ideal group now or in posterity to share it with us.

Gregariousness in habits of action. But if men tend to think in groups they tend more emphatically still to act in groups, to be acutely uncomfortable when acting in a fashion different from that customary among the majority of their fellows. Habits of action are more deep-seated physiologically than habits of thought (which is one reason why our theories are so often in advance of our practice). People will accede intellectually to new ideas which they would not and could not practice, the mind being, as it were, more convertible than the emotions. Even in minor matters, in dress, speech, and manners, we like to do the accustomed thing. It is more painful for most people to use the wrong fork at dinner, or to be dressed in a business suit where every one else is in evening clothes, than to commit a fallacy, or to act upon prejudices rather than upon logical conclusions.

The individual's instinctive desire to be identical in action with other members of his group, from the collars and clothes he wears to the way he brings up his children, is greatly reinforced by the punishment meted out to those who differ from the majority. This may vary from ridicule, as in the case of the laughter that greets the poet's proverbial long hair and flowing tie, the foreigner's accent, or a straw hat in April, to the confinement and privation that are the penalties for any marked infringement of the accepted modes of life. Even when the punishments are slight, they are effective. A man who has no moral or religious scruples with reference to gambling on any day of the week will, to avoid the social ostracism

of his neighbors, refrain from playing cards on his front porch on Sunday. For no other reason than to avoid being consciously different, many a man will not wear cool white clothes on a hot day in his office who will wear them on a cool evening at the seashore.

The effect of gregariousness on innovation. A strong instinctive tendency to community of action and thought is in large part responsible for the comparative absence of innovation in either of these fields. A premium is put upon the conventional, the customary, the common, both in the instinctive satisfaction they give the individual, and in the high value set upon them by society. In advanced societies, however, the habit of inquiry and originality may itself come to be endorsed by the majority, as it is among scientists and artists. The herd instinct need not always act on the side of unreason. Among the intellectual classes, it is already enlisted on the side of free inquiry, which among scholars is the fundamental common habit.

> If rationality were once to become really respectable, if we feared the entertaining of an unverifiable opinion with the warmth with which we fear using the wrong implement at the dinner table, if the thought of holding a prejudice disgusted us as does a foul disease, then the dangers of man's suggestibility would be turned into advantages.[1]

Sympathy (a specialization of gregariousness). Sympathy, in the strict psychological sense of the term, means a "suffering with, the experiencing of any feeling or emotion when and because we observe in other persons or creatures the expression of that feeling of emotion." [2] The behavior of animals exhibits the external features of sympathetic action very clearly. "Two dogs begin to growl or fight, and at once all the dogs within sound and sight stiffen themselves, and show every symptom of anger. Or one beast in a herd stands arrested, gazing in curiosity on some unfamiliar object, and presently his fellows also, to whom the object may be invisi-

[1] Trotter: *loc. cit.*, p. 45.

[2] McDougall: *loc. cit.*, p. 92.

ble, display curiosity and come up to join in the examination of the object."[1]

Human beings tend not only sympathetically to reproduce the instinctive actions of others,[2] but they tend, despite themselves, to experience directly and immediately, often involuntarily, the emotions experienced and outwardly manifested by others. Almost every one has had his mood heightened to at least kindly joy by the presence in a crowded street car of a young child whose inquiring prattle and light-hearted laughter were subdued by the gray restraints and responsibilities of maturity. One melancholy face can crush the joy of a boisterous and cheerful party;[3] the eagerness and enthusiasm of an orator can, irrespective of the merits of the cause he is defending, provoke eagerness and enthusiasm for the same cause among an audience that does not in the least understand what the orator is talking about.

One brand of cigarettes was recently advertised by the face of a young soldier, roguishly irresponsible, palpably and completely given over to joy. One found one's self transported into something of this same mood before one had a chance to speculate at all as to whether there was any causal relation between the specific quality of tobacco the youngster was smoking, and that contagious, undeniable delight. What is called personal magnetism is perhaps more than anything else the ability to provoke in others sympathetic experiences of pleasant and exhilarating emotions.

Sensibility to the emotions of others, though possessed by

[1] McDougall: *loc. cit.*, p. 93.

[2] "In man infectious laughter or yawning, walking in step, imitating the movements of a ropewalker, while watching him, feeling a shock in one's legs when one sees a man falling, and a hundred other occurrences of this kind are cases of physiological sympathy." Ribot: *Psychology of the Emotions*, p. 232.

Reproduction of the actions of others has by a certain school of philosophers and psychologists, notably Tarde, Le Bon, and Baldwin, been ascribed to imitation. But no experimental researches have revealed any such specific instinct to imitate (see Thorndike, p. 73 ff.), and "imitations" of acts can generally be traced to sympathy, or suggestion — which is sympathy on an intellectual plane.

[3] Such expressions as "kill joy," "wet blanket," "life of the party" are instances of the popular appreciation of the fact of social contagion.

almost all individuals, varies in degree. The complete absence of it marks a man out as "stolid," "cold," "callous," "brutal." Such a type of personality may be efficient and successful in pursuits requiring nothing besides a direct analysis of facts, uncolored by any irrelevant access of feeling, as in the case of mathematics and mechanics. But the geniuses even in strictly intellectual fields have frequently been men of sensitiveness, delicacy, and responsiveness to the feelings of others. That intellectual analysis, however, does frequently blunt the poignancy of feeling is illustrated in the case of John Stuart Mill, who writes in his *Autobiography:*

> Analytic habits may thus even strengthen the associations between causes and effects, means and ends, but tend altogether to weaken those which are, to speak familiarly, a *mere* matter of feeling. They are, therefore, I thought, favorable to prudence and clear-sightedness, but a perpetual worm at the root both of the passions and of the virtues; and above all fearfully undermine all desires and . . . all except the purely physical and organic; of the entire insufficiency of which to make life desirable, no one had a stronger conviction than I had. . . . All those to whom I looked up were of the opinion that the pleasure of sympathy with human beings, and the feelings which made the good of others, and especially of mankind on a large scale, the object of existence, were the greatest and surest sources of happiness. Of the truth of this I was convinced, but to know that a feeling would make me happy if I had it, did not give me the feeling.[1]

A generous degree of susceptibility to the emotions of others makes a man what is variously called "mellow," "humane," "large-hearted," "generous-souled." The possession of such susceptibility is an asset, first, in that it enriches life for its possessor. It gives him a warm insight into the feelings, emotions, desires, habits of mind and action of other people, and gives to his experiences with them a vivid and personal significance not attainable by any hollow intellectual analysis. It is an asset, moreover, in the purely utilitarian business of dealing with men. The statesman or executive

[1] Mill: *Autobiography* (Holt edition), p. 138.

who deals with men as so many animate machines, may achieve certain mechanical and arbitrary successes. But he will be missing half the data on which his decisions must be based if he does not have a live and sensitive appreciation of how men feel when placed in given situations. The placing of women in positions of labor management where women chiefly are to be dealt with is an illustration of the recognition of the importance of sympathy, fellow-feeling in the management of human affairs. One of the reasons why many university scholars make poor teachers is because they cannot place themselves back at the point where a subject was as live and fresh and virgin to them as it is to their students.

An extraordinary degree or a decided hypertrophy of emotional susceptibility is as dangerous a trait as its possession in a reasonable degree is a utility and an enrichment of life. It results in the hysteria or sentimentalism which adds to the real evils and difficulties of life fancied grievances and disasters. Such temperaments when confronted with any good or beautiful action dissolve into ecstasy, and when faced with a problem or a difficulty dissolve into tears. Doctors will not treat their own children because the overplus of sympathy is a hindrance to action. Sentimental ladies are not the most efficient charity workers or prisoner reformers.

While there is a general tendency to experience sympathetically the feelings of others, this becomes specialized in most people, and one tends to experience most immediately and intensely the emotions of one's own kind, physically, socially, and intellectually. Sympathy is a specialization of man's general gregariousness, and becomes more specialized as one becomes habituated exclusively to a small group. Within this small group, individuals not only experience the emotions of others, but like to share and communicate their own emotions.

The nearer people are to us in mode of life, social status, and intellectual interests, the closer is community of feeling and "consciousness of kind." Two Americans meeting in a for-

eign country have a quick and sympathetic understanding of each other. Two alumni of the same college meeting in a distant city have a common basis of interest and feeling.

This easy give-and-take of feeling and emotion makes the deep attractiveness of intimate companionship. Our companion has but to mention a name or a place, and we experience the same associations, the pleasures, or antipathies which he does. A gesture, a curious glance of the eye, a pause, we understand as quickly as if he had spoken a sentence. But not only do we understand his feelings; he (or she) understands ours. And for most people, all their interests and enjoyments are heightened by the presence of an intimately known companion.

> Many children manifest very clearly this tendency of active sympathy; they demand that their every emotion shall be shared at once. "Oh, come and look!" is their constant cry when out for a walk, and every object that excites their curiosity or admiration is brought at once, or pointed out, to their companion. . . . On the other hand, another child, brought up, perhaps, under identical conditions, but in whom this impulse is relatively weak, will explore a garden, interested and excited for hours together, without once feeling the need for sympathy, without once calling on others to share his emotions.[1]

In adult life, few people care to go to theater or concert alone, and a man at a club will wander half through the dining-room until he will find some one with whom he will feel like sitting through a dinner conversation.

The fact that emotions exhibited in one individual are readily aroused in another makes art possible and makes it interesting. A poet by a phrase, a musician by a chord or melody, can suddenly reproduce in us his own feeling of gayety or exaltation. A painter by disposition of line and color can suggest the majesty of mountains, or the sadness of a sunset as he himself has experienced it. In novels and dramas we can *relive* the feelings that the writer imagines to have been

[1] McDougall: *loc. cit.*, p. 172.

experienced by others. It is testimony to the easy excitability of sympathy as well as to an artist's skill that this can sometimes be done in a few lines or paragraphs. Witness the famous opening of Poe's *Fall of the House of Usher:*

During the whole of a dull, dark, and soundless day in the autumn of the year, when the clouds hung oppressively low in the heavens, I had been passing alone on horseback, through a singularly dreary tract of country; and at length found myself, as the shades of evening drew on, within view of the melancholy House of Usher. I know not how it was — but, with the first glimpse of the building, a sense of insufferable gloom pervaded my spirit. I say insufferable; for the feeling was unrelieved by any of that half-pleasurable, because poetic, sentiment, with which the mind usually receives even the sternest natural images of the desolate or terrible. I looked upon the scene before me — upon the mere house and the simple landscape features of the domain, upon the bleak walls, upon the vacant eye-like windows, upon a few rank sedges, and upon a few white trunks of decayed trees — with an utter depression of soul which I can compare to no earthly sensation more properly than to the after-dream of the reveller upon opium; the bitter lapse into everyday life, the hideous dropping off of the veil. There was an iciness, a sinking, a sickening of the heart, an unredeemed dreariness of thought which no goading of the imagination could torture into aught of the sublime. What was it — I paused to think — what was it that so unnerved me in the contemplation of the House of Usher?

To Aristotle tragedy seemed to afford a cleansing or "katharsis of the soul" through the sympathetic experience of pity or fear. To Schopenhauer music was the greatest of the arts because it made us at one with the sorrows and the strivings of the world. All the representative arts are vivid ways of making us feel with the passions or emotions that stir mankind. And those men are poets, painters, or musicians who, besides having a unique gift of expression, whether in word, tone, or color, have themselves an unusually high sensitivity to the moods of other men and to the imagined moods of the natural scenes among which they move.[1]

[1] Poets generally are so susceptible to emotional shades and nuances that they read them into situations where they are not present, and then reproduce them sympathetically in their works. The so-called "pathetic fallacy".

In experience, the presence or absence of genuine sympathy with the emotions of others determines to no small extent the character of our dealings with them. Even courts of justice take motives into account and juries have been known to ask for clemency for a murderer because of their keen realization of the provocation which he had undergone. Fellow-feeling with others may again warp our judgments or soften them; in our judgment of the work of our friends, it is difficult altogether to discount our personal interest and affection. On the other hand, we may have the most sincere admiration and respect for a man, and yet be seriously hampered in our dealings with him, socially or professionally, by a total lack of sympathy with his motives and desires.

Praise and blame. An important part of man's social equipment is his susceptibility to the praise and blame of his fellows. That is, among the things which instinctively satisfy men are objective marks of praise or approval on the part of other people; among the things which annoy them, sometimes to the point of acute distress, are marks of disapproval, scorn, or blame. This is illustrated most simply and directly in the satisfaction felt at "intimate approval as by smiles, pats," kindly words, or epithets applied by other people to one's own actions or ideas, and the discomfort, amounting sometimes to pain, that is felt at frowns, hoots, sneers, and epithets of scorn or derision. One student of this subject notes "as early as the fourth month a 'hurt' way of crying which seemed to indicate a sense of personal slight. It was quite different from the cry of pain or that of anger, but seemed about the same as the cry of fright. The slightest tone of reproof would produce it. On the other hand, if people took notice and laughed and encouraged, she was hilarious." [1]

Man's sensitiveness to praise and blame is paralleled by his instinctive tendency to express them.

is an excellent illustration of this. Poets sympathize with the emotions of a landscape, emotions which were, in the first place, their own.

[1] Cooley: *Human Nature and the Social Order*, p. 166.

Smiles, respectful stares, and encouraging shouts occur, I think, as instinctive responses to relief from hunger, rescue from fear, gorgeous display, instinctive acts of strength and daring, victory, and other impressive instinctive behavior that is harmless to the onlooker. Similarly, frowns, hoots, and sneers seem bound as original responses to the observation of empty-handedness, deformity, physical meanness, pusillanimity, and defect. As in the case of all original tendencies, such behavior is early complicated and in the end much distorted, by training; but the resulting total cannot be explained by nurture alone.[1]

Man's instinctive tendency to respond to praise and blame and to exhibit them is, next to gregariousness — through which men in the first place are able to live together — the individual human trait most significant for social life. For while the desire for praise, the avoidance of blame, and the expression of both are instinctive, the occasions on which they are called forth depend on the traditions and group habits to which the individual has been exposed. He soon learns that in the society in which he is living, certain acts will bring him the praise of others; certain other acts will bring him their disapproval. The whole scope of his activity may thus be profoundly modified by the penalties and prizes in the way of praise and blame which society attaches to different modes of action. And the more explicit and outward signs there are of the approval or scorn of others, the more will individual action be subject to social control.

As Plato said so long ago and said so well:

Whenever they [the public] crowd to the popular assembly, the law courts, the theaters, the camp, or any public gathering of large bodies, and there sit in a dense and uproarious mass to censure some of the things said or done, and applaud others, always in excess; shouting and clapping, until, in addition to their own noise, the rocks and the places wherein they are echo back redoubled the uproar of their censure and applause. At such a moment, how is a young man, think you, to retain his self-possession? Can any private education that he has received hold out against such a torrent of censure and applause, and avoid being swept away down the stream, wherever it

[1] Thorndike: *Educational Psychology*, Briefer Course, pp. 32–33.

may lead, until he is brought to adopt the language of these men as to what is honorable and dishonorable, and to imitate all their practices, and to become their very counterpart? [1]

We have already had occasion to point out that education is the method by which society inculcates in its younger members habits which are regarded as socially beneficial. In its broadest sense the whole social environment is an individual's education. And it is an education chiefly through experience with other people, discovering what they will and will not tolerate, what they will cherish and what they will condemn.

The elaborate paraphernalia and rites of fashion in clothes exist chiefly by virtue of their value as means of securing diffuse notice and approval. The primitive sex display is now a minor cause: women obviously dress for other women's eyes. Much the same is true of subservience to fashions in furniture, food, manners, morals, and religion. The institution of tipping, which began, perhaps, in kindliness and was fostered by economic self-interest, is now well-nigh impregnable because no man is brave enough to withstand the scorn of a line of lackeys whom he heartily despises, or of a few onlookers whom he will never see again.[2]

One of the things we mean when we say a man is worldly-wise, shrewd, knows human nature, is that he knows what will win people's admiration, and knows, moreover, to distinguish between that which they publicly condemn and secretly approve, and *vice versa*. In the passage quoted above Plato was trying to show how the young Athenian acquired not wisdom itself, but "worldly wisdom," the ability to get along in affairs. This he learned not from the professional teachers, but from the Athenian public, with whose approvals and disapprovals he came in daily contact.

Praise and blame modify habit. In order to avoid censure and gain the expressed approval of others, people learn, either, as we say, through bitter experience, or deliberately, to modify their actions. The well-brought-up child, even when its mother is not about and its appetite unsatisfied, may be

[1] Plato: *Republic* (Davies and Vaughn translation), p. 208.
[2] Thorndike: *loc. cit.*, p. 32.

ashamed to say "Yes" to a second offering of ice cream. The ten-year-old who likes to be coddled by his mother in private would be acutely embarrassed to be "babied" in the presence of other people. Among adults, likewise, actions are checked, prompted, or modified by the praise and blame that have become habitually associated with them. Men like to appear virtuous, even if they do not like to practice virtue. It is not only the professional politician who does generous acts for public approval, nor is even the most disinterested and conscientious work altogether free from being affected by the expressed attitudes of approval or disapproval of other people. Even transportation companies have found that they can increase the efficiency of their employees by expressing in some form the approval of their employees' courtesy and loyalty.[1] "A man, again, . . . may fail to see any 'reason' why an elementary-school teacher or a second-division clerk cannot do his work properly after he has been 'put in his place' by some official who happens to combine personal callousness with social superiority. But no statesman who did so could create an effective educational or clerical service." [2]

To say that we are moved to action by praise and blame is not to indicate that actions thus motivated are done in a spirit of hypocrisy or charlatanism. Even the most sincere acts are prompted or sustained, especially where their performance involves serious personal privation or sacrifice, by the imagined or actual approval of those whom we love, admire, or respect. Whose praise and blame individuals will care about depends on their education and temperamental differences. That there will be some group, however small, is almost sure to be the case. The poet who curls his lip at popular taste cherishes the more keenly the applause of those whom he regards as competent judges. The martyr will be unmoved by the curses, the jeers, and the hoots of the contemporary

[1] Many transportation companies maintain a merit system. Sometimes they award special insignia, as the green flag to the New York bus-drivers who save gasoline.

[2] Wallas: *Great Society*, p. 197.

multitude so long as he has the trust of his small band of comrades or faith that the Lord approves his ways. A man who is utterly alone in the approval of his actions is regarded as crazy or is driven so by the perpetual disesteem in which he is held. There have been cases in literature and life of accused criminals who could bear up against the belief of the whole world in their guilt so long as one friend or kinsman had faith in them. That faith gone, they completely collapsed.

Desire for praise may lead to the profession rather than the practice of virtue. While the desire for social approval is strong in most men, so are other desires. It happens, moreover, that the actions to which men's instincts prompt them are not always such as would be approved by others.[1] In order, therefore, to have their cake and eat it, to do what they please and yet seem to please others, men often conceal the discrepancy between what they profess and what they practice. One of the least agreeable features of civilized society is the extent to which the codes which men and groups profess differ from those by which they live. Men who have ostensibly Christian codes of honor, and, indeed, practice them in their private lives, will have an actual "ethics" for business that they could not possibly sanction in their dealings as trustees of a church. There are practices within trades and professions, the familiar "trade" practices, and "ethics" of the profession, which, for social as well as for professional reasons, their practitioners would not want known. "Company" manners are a trivial illustration of this, but there are more serious instances. One has but to recall the sensation created a few years ago when a minister of a fashionable congregation called upon his congregation to practice Christianity, or, on a superb scale, Tolstoy's leaving the estates and mode of life of a rich Russian noble, in order to live the simple life he regarded as prescribed by the Christian teaching.[2]

[1] At least not publicly approved. There is, however, admiration, often unconcealed, for the man who does even an unusual act conspicuously well. One need only mention a Raffles or a Captain Kidd.

[2] See Tolstoy's *Diary* and *Confessions*.

Psychologically, therefore, the cause of the discrepancy between the codes which men preach and profess and those which they practice, is thus seen to be a desire to secure illicit (that is, socially unsanctioned) satisfactions without incurring the penalty of social disapproval. Part of this discrepancy is not to be set down to the evils men actually do so much as the irrationality and fanaticism of the codes which they have been taught to profess. This is the case, for example, where excessive Puritanism or fanaticism, not possible for most men, is imposed upon them by an arbitrary and fanatical teaching. They will then pretend to types of action socially regarded as virtues in order to avoid the penalties incurred by not practicing them. The desire for "respectability" is responsible for no small amount of pretension, illustrated pathetically in cases where individuals, to satisfy the standards of their associates, live beyond their means physically, socially, or intellectually.[1]

Again, codes of action remain formally accepted long after they have ceased to be taken seriously. In States that went "dry" where there was no majority public sentiment in their favor, "bootlegging," the illicit making and selling of whiskey, was practiced freely, because not many people regarded prohibition as a serious matter, or its infringement as a serious crime. Legal codes remain not infrequently a generation behind public opinion, and many ideas are verbally professed that nobody takes quite seriously.

The social effectiveness of praise and blame. How far the social estimates of approval and disapproval affect the conduct of the individual depends on the degree to which, through education, public opinion, and law, he is made part of the group. In primitive society, even the slightest details of conduct were regulated by the group, through an elaborate system of punishments for slight infringements. In civilized

[1] "Many Bostonians, *crede experto* (and inhabitants of other cities, too, I fear), would be happier men and women to-day if they could once for all abandon the notion of keeping up a Musical Self and without shame let people hear them call a symphony a nuisance." James: *Psychology*, vol. I, p. 311.

society, the development of a sense of personal selfhood and social recognition of its importance has to a degree freed individual action from complete domination by the group. This has in part been compensated by the education of the contemporary citizen to national interests, and social sympathy, which render him susceptible to the praise and blame of public opinion.

The effectiveness of praise and blame in determining action depends also on the explicitness with which they are expressed. In contemporary life the control of public opinion is made precarious because there is so rarely complete or palpable unanimity on any subject among the variety of groups that constitute a modern society. In a large city there are so many groups, so many sets of opinion, that an individual may not feel any great pressure of praise and blame except from the small circle of people with whom he is associated. In small communities action is restrained by the fear of ostracism or contempt of the whole group among whom one is living. But in large cities, where one may not be known by one's next-door neighbor, this restraint is much reduced. The temptations of a metropolis, so often referred to in the lurid literature of the day, consist not in temptations more numerous than or different from those in smaller places, but in the marked absence of social control as compared with small villages where every one knows every one else's business.

The influence of the social estimate on individual conduct depends finally on individual differences in suggestibility. In normal individuals susceptibility to the praise and blame of others is very high, especially among the close circle of friends, professional and business associates among whom one moves. This susceptibility is heightened when the praise or blame comes from persons superior in social status, though here the element of fear of the consequences of displeasing is perhaps more important than the responsiveness to the praise and blame itself. To the praise and blame of close associates most men are also highly suggestible, not less so when there

is equality in social status. "Birds of a feather flock together," but humans tend to *become* similar *because* they flock together. There are few men who can withstand the pressure of doing what their group approves, and refraining from doing what it disapproves.

In some men susceptibility to the attitudes of others is extremely low, and of such are both criminals and martyrs made. In the prisons of this country there are a large number of men absolutely indifferent to the usual social standards, completely undeterred by the codes of conduct by which other people cannot help but be governed. Such absolute callousness to the feelings which govern the majority of mankind as we read of every now and then in the trial of some desperate criminal, is not infrequently associated with abnormally low intelligence, the sodden stolidity of the traditional criminal type. Where it appears, as it sometimes does, in criminals of high intelligence, it is regarded by psychiatrists as a specific abnormality, comparable to color-blindness or a physical deformity.

There are, on the other hand, individuals whose apparent low suggestibility is of the highest social value. There are striking instances, throughout the long struggle toward human liberty, of persons who could withstand the public opinion of their own day in the light of some ideal which they cherished, of men who needed no other approval than their consciences, their better selves, or their god. Socrates drinking the fatal hemlock, Christ upon the cross, the Christian saints, Joan of Arc, the extreme dissenters of every generation, are instances of men and women seemingly unmoved by the praise and blame of their contemporaries. Sustained by their deep inner conviction of the justice and significance of their mission, they have been content to suffer scorn, ridicule, and martyrdom at the hands of their own generation in a persistent devotion to what in their eyes constituted the highest good of mankind.

Social estimates and standards of conduct. Individuals

are early habituated to the customs of the society in which they live, and come to approve, as might be expected from the power of men's habits and from their instinctive gregariousness, those things which they or their companions have always done. That "people don't do such things," or that "everybody does them," is a frequently assigned reason for the approval or condemnation of an act. Social approvals thus become affixed to acts which are regularly done by the majority, and divergences are subjected to varying degrees of censure. In civilized societies variations from customs that are not legally enforced are punished mainly by social ostracism. There is no law against walking down a crowded city street in Elizabethan costume, yet few would indulge their taste for beautiful but archaic dress in the face of all the ridicule they would incur. The whole system of etiquette, of the standard of living of respectable society, is maintained in large part because of the approvals and outward marks of admiration that go to some types of life and the contempt in which others are held. Much of the economic activity of the leisure class, as Professor Veblen has so well pointed out, is devoted to wasting time and spending money conspicuously as outward indications that the individual is living up to established and approved standards.[1]

The more significant folkways, standards of importance and unimportance, of the admirable and the despicable, the noble and the base, are determined by approvals and disapprovals that have become socially habitual. When we speak of a country being imperialistic or materialistic, we mean that most individuals in it, or at least those who are articulate or influential, perform or approve of actions leading to national or individual aggrandizement. The amount of money, time, and energy that is spent on amusement, public works, education, the army and navy is a fairly accurate gauge of the relative group approvals they have respectively secured. In the same way the professions and occupations in which men en-

[1] Veblen: *Theory of the Leisure Class.*

gage are determined by the social prestige attaching to them no less than by economic considerations. The pay of stenographers is no less than that of primary-school teachers; it is often much more; yet many a girl remains a teacher for the gentility which is traditionally associated with the profession. In the same way many girls, in spite of the fact that they are economically and physically better off in domestic service than in factory work, still prefer the latter because of the social inferiority which is associated with the servant's position.

Approvals and disapprovals become fixed to acts, in the first place, because of some supposed danger or utility they possess. But whether the acts are really socially useful or not, approvals and censures once fixed tend to remain habitual, even though the conditions which first called them forth are utterly changed. We are to-day still more shocked by errors in etiquette than in logic; we are still horrified by the infringement of a law which, if we stopped to consider it, is not now, if it ever was, of any genuine service to mankind.

In advanced societies approvals are not always reserved for the habitual. Certainly in science original research and discovery are generally welcomed. In art originality is cherished, at least by the discriminating.[1] Variation in action is for reasons discussed in other connections less generally welcomed. But in advanced societies, criticism and reflection upon social institutions and habits may themselves come to be sanctioned and encouraged. Already we are beginning to endow the scientific study of government and industrial relations, and regarding with favor genuine inquiry into the possibilities of progress.

Importance of relating praise and blame to socially impor-

[1] Even in art most people's approvals and disapprovals are fixed by what is called "good taste," which consists not infrequently in approving what other people approve. Æsthetic approval thus becomes approval of the customarily recognized. It took a Ruskin to make the neglected genius of Turner fashionable. Keats and Byron were bitterly attacked by the orthodox critics of their generation.

tant conduct. What people approve and disapprove, if their approval becomes sufficiently emphatic, is fixed by law. Law is the official and permanent preservation and enforcement of public approval and condemnation. When certain acts are regarded as of crucial importance, the group does not depend on the precarious effectiveness of public opinion, but deliberately attaches punishments to the performance of undesired acts, and, more infrequently, rewards to the practices of others. Most of our laws are enforcement of social condemnations, for the performance or the non-performance of specific acts, rather than direct encouragements of action. But which laws will be passed depends in the first place on social approval or public opinion. And if, as happens in our complicated political machinery, laws are passed which have not the sanction of widespread public approval, they remain "dead letters."

Outside the field of legal control, individual action is controlled primarily by public opinion. There are many practices, strictly speaking "within the law," that an increasingly enlightened public opinion will not sanction; there are many practices encouraged by an enlightened public which no law compels. There is no law forcing business establishments to close every Saturday during the summer, yet many now do. There are many courtesies practiced by them which are not ordained by law. That adverse public opinion may have economic consequences if disregarded is evidenced by the powerful instrument the Consumers' League found in advertising against firms that maintained particularly unsanitary and morally degrading working conditions for their employees, or the dread that hotels and department stores have for adverse publicity. The phenomenal development of modern advertising is an instance of the direct economic values that have been found in winning public approval. There is more than metaphor in the statement made during the war that Lord Northcliffe, as owner of a chain of English newspapers with an immense circulation, was a "cabinet minister without portfolio."

The growth of humanitarian sentiment has frequently enforced the improvement of labor and social conditions before improvements were made compulsory by law. And in that field of personal relations, which constitute so large a part of our daily life, our conduct is controlled almost entirely by the force of the public opinion with which we come in contact. There is much more courtesy and kindliness and coöperation manifested in the ordinary contacts of life of a modern city than is required, or ever could be secured by statute.

Education as the agency of social control. There is enormous power in the habits of approval or disapproval to which we have, in our early days, been subjected by our parents, teachers, and companions. It is through education, in the broadest sense, that the young come to learn, and hence to practice, those actions which are socially approved, and by the same token to avoid those acts which are socially condemned. Through formal education the adult members of a society impress upon the plastic minds of the immature those habits of thought and action which are currently recognized as desirable. Education thus becomes the crucial instrument by which social standards are established and transmitted.

> Society exists through a process of transmission quite as much as biological life. The transmission occurs by means of communication of habits of doing, thinking, and feeling, from the older to the younger. Without this communication of ideals, hopes, expectations, standards, opinions, from those members of society who are passing out of the group life to those who are coming into it, society could not survive.[1]

Society survives through education. Just as truly might it be said that the kind of society, art, culture, industry, religion, science that does survive depends on the kind of likes and dislikes that are through education made habitual in the young.

Education, however, may not only transmit existing standards, but can be used to inculcate newer and better expecta-

[1] Dewey: *Democracy and Education*, pp. 3–4.

tions and ideals. In the adult, habits are already set physiologically, and kept rigid by the demands of economic life. In the young there is a "fairer and freer" field. Through education the immature may be taught to approve ways of action more desirable than those which have become habitual with their adult contemporaries. The children of to-day may acquire habits of action, feeling, and thought that will be their enlightened practice as the adults of to-morrow. All great social reformers, from Plato to our own contemporaries like Bertrand Russell, have seen in education, therefore, the chief instrument, as it is the chief problem, of social betterment. We may train the maturing generation to approve modes of behavior which the best minds of our time may have found reason to think desirable, but which could not be substituted immediately for the fixed habits of the already adult generation.

Social activity, and the social motive. In our analysis of the social nature of man we have, thus far, been dealing with his specific social tendencies. But apart from these, or rather as an outgrowth of these, men exhibit what Professor Woodworth has well described as a gift for "learning" social behavior.

> Possessing, as he eminently does, the capacity for group activity, man is interested in such activity. He needs no ulterior motive to attract him to it. It is play for him. . . . The social interest is part and parcel of the general *objective* interest of man.[1]

In other words, the activity of man as an individual is not simply deflected a little by man's native gregariousness, sympathy, and susceptibility to praise and blame. Rather, group activity becomes to the gregarious human, born into an environment where he must act with and among other human beings, an interesting and exciting activity in and for itself. Men enjoy working in a group or a society for joint and common objects just as they enjoy food or musical composition or golf.

[1] Woodworth: *Dynamic Psychology*, pp. 202, 203.

> The social motive is of the same order as the musical or mathematical motive. Just as one who has the musical gift takes to music naturally and finds it interesting for its own sake, so the socially gifted individual understands other people, sees the possibilities of collective activity, and the ways of coördinating it, and enters into such doings with gusto. . . . The social gift is a capacity for *learning* social behavior. Individuals differ in degree in the social gift, as in other capacities; some are capable of becoming creative artists or inventors along social lines.[1]

The social behavior of man is thus seen to be no curious anomaly and contradiction in the life of an otherwise thoroughly egoistic individual. Man is instinctively social; he finds social activity useful in the satisfaction of his own desires, and he comes from his native tendencies and acquired habits of social behavior to enjoy and take part in social activities for their own sake. The individual does not have to be coerced into social activity; he finds in such behavior the same pleasure that attends the fulfillment of any of his native or acquired reactions. Society has been variously pictured as a force holding the individual in check, as an organism of which he is a part, as a machine of which he is a cog. Society consists rather as the collective name for the coöperative and associated activities of human beings who find such activity, by nature and by habit, interesting for its own sake.

[1] Woodworth: *Dynamic Psychology*, p. 203.

CHAPTER VI

CRUCIAL TRAITS IN SOCIAL LIFE

The interpenetration of human traits. This chapter is devoted to a consideration of a number of individual human traits — curiosity, pugnacity, leadership, fear, love, hate, etc., and some of their more important social consequences. These are seldom present in isolation. A man is not, under normal circumstances, simply and solely pugnacious, curious, tired, submissive, or acquisitive. One's desire to own a particular house at a particular location may be complicated by the presence of several of these traits at once. The house may be wanted simply as a possession, a crude satisfaction of our native acquisitiveness. It may be sought further as a mode of self-display, an indication of how one has risen in the world. Its attractiveness may be heightened by the fact that it is situated next door to the house of a rather particularly companionable old friend. It may be peculiarly indispensable to one's satisfaction because it is also being sought by a detested rival. Moreover, as we shall see in the discussion of the Self, these traits are interwoven with each other and attain varying degrees of power as motive forces in an individual's character.

But while these distinctive human traits are seldom apparent in isolation, it is worth while to consider them separately, not only because the elements of human behavior will thus stand out more clearly, but because in certain individuals one or another of these traits may be natively of especial strength. And further, in differing social situations, the possession or the cultivation of one or another of these native endowments may be of particular social value or danger. And in any given situation, one or another of them may be predominant, as when a man is intensely angry, or curious, or tired. Thus an

individual may have a marked capacity for leadership, or an extraordinarily tireless curiosity, or an abnormally developed pugnacity or acquisitiveness. The capacity for leadership, as will later be discussed in some detail, will be of particular social value in large enterprises; patient and persistent inquiry may produce science; pugnacity when freely expressed may provoke quarrels, bickerings, and war. In the following discussion, the continual interpenetration and qualification of these traits by one another in a complex situation must be recognized. Else it may appear in the discussion of any single trait, as if by means of it all human action were being explained. Rather the aim is to trace them as one might the elements in the pattern of a tapestry, or the recurrent themes in the development of a symphony. But as the symphony is more than a single melody, the tapestry more than one element of line or color, so is human life more than any single trait.[1]

The fighting instinct. Almost all men exhibit in varying degrees the "fighting instinct"; that is, the tendency, when interfered with in the performance of any action prompted by any other instinct, to threaten, attack, and not infrequently, if successful in attack, to punish and bully the individual interfering.

The most mean-spirited cur will angrily resent any attempt to take away its bone, if it is hungry; a healthy infant very early displays anger if its meal is interrupted, and all through life most men find it difficult to suppress irritation on similar occasions. In the animal world the most furious excitement of this instinct is provoked in the male of many species by any interference with the satisfaction of the sexual impulse.[2]

[1] Philosophers and others have time and again made the mistake of simplifying human life to a single motive or driving power. Hobbes rested his case on fear; Bain and Sutherland on sympathy; Tarde on imitation; Adam Smith and Bentham on enlightened self-interest. In our own day the Freudians interpret everything as being sexual in its motive. And most recently has come an interpretation of life, as in Bertrand Russell and Helen Marot, in terms of the "creative impulse."

[2] McDougall: *loc. cit.*, p. 60.

This original tendency to fight is very persistent in human beings, but is susceptible of direction, and is not, in civilized life, frequently revealed in its crude and direct form, save among children and among adults under intense provocation and excitement. Occasionally, however, pugnacity is displayed in its simple animal form. "Man shares with many of the animals the tendency to frighten his opponent by loud roars or bellowings. . . . Many a little boy has, without example or suggestion, suddenly taken to running with open mouth to bite the person who has angered him, much to the distress of his parents." [1] As the individual grows older, he learns to control the outward and immediate expression of this powerful and persistent human trait. He learns in his dealings with other people not to give way, when frustrated in some action or ambition, to mere animal rage. The customs and manners to which a child is early subjected in civilized intercourse are effective hindrances to uncontrolled display of anger and pugnacity; superior intelligence and education find more refined ways than kicking, pummeling, and scratching of overcoming the interferences of others. But even in gentle and cultured persons, an insult, a disappointment, a blow will provoke the tell-tale signs of pugnacity and anger, the flushing of the cheeks, the flash of the eye, the incipient clenching of the fists, the compressing of the teeth and lips, and the trembling of the voice. We substitute sarcasm for punching, and find subtly civilized, and, in the long run, more terrible, ways than bruises of punishing those who oppose us in our play, our passions, our professions. But our ancestors were beasts of prey, and there is still "fighting in our blood."

The fighting instinct is aroused by both personal and impersonal situations, and is occasioned even by very slight interferences, and even when the author of the interference is neither human nor animate. Quite intelligent men have been known to kick angrily at a door as if from pure malice it re-

[1] McDougall: *loc. cit.*, p. 61.

fused to open. Irate commuters have glared vindictively at trains they have just missed. The glint of anger is roused in our eye by an insolent stare, an ironic comment, or an impertinent retort. The "boiling point" varies in different individuals and races, and pugnacity is generally more readily roused in men than in women. There are some persons, like the proverbial Irishman, who, seeing the slightest opportunity for a fight, "want to know whether it is private, or whether anybody can get in." In most men pugnacity is more intense when it is provoked by persons; except for a moment, one does not try to fight a chair struck in the dark.

Under the conditions of civilized life the primitive expression of pugnacity in physical combat has been outlawed and made unnecessary by law and custom. Individuals are prevented by the fear of punishment, besides their early training and habits, from settling disputes by physical force. But as the instinct itself remains strong, it must find some other outlet. This it secures in more refined forms of rivalry, in business and sport, or, all through human history, in fighting between groups, from the squabbling and perpetual raids and killings, and the extermination of whole villages and tribes in Central Borneo, to the wars between nations throughout European history.

Pugnacity a menace when uncontrolled. The strength and persistency of this human tendency, when uncontrolled or when fostered between groups, make it a very serious menace. Like all the other instincts, and more than most, it is frustrated and continually checked in the normal peace-time pursuits of contemporary civilization. Participation, imaginative at least, in a great collective combat undoubtedly holds some fascination for the citizens of modern industrial society, despite the large-scale horror which war is in itself, and the desolation it leaves in its wake. During peace the fighting instinct for most men receives satisfaction on a small scale, sometimes in nothing more important than small bickerings and peevishness, or in seeing at first hand or on the ticker a

championship prize-fight. The pessimism which many writers have expressed at the possibility of perpetual peace rests in part on their perception of the easy excitability and deep persistence of this impulse, especially among the vigorous and young.

Not only may the fighting instinct be aroused by the possibility of international wars, but it may be used by fomenters and agitators to add a sense of intense pugnacity and violent anger to the genuine friction that does exist between conflicting interests in the same society. The theory of a "class war" possibly finds its appeal for many minds as much in its picturesque stimulation of their instincts of pugnacity as in the logic of its economics.

Pugnacity as a beneficent social force. While the power of pugnacity and its easy stimulation makes this instinct a peculiarly inflammable and dangerous motive force in civilized society, it is, on the other hand, an indispensable source of social progress. Many psychologists and sociologists, such as McDougall, Bagehot, and Lang, attribute the superiority in culture and social organization of the European races over, say, the Chinese and East Indians, to the fighting instinct. In the long series of wars that for centuries constituted much of the history of Europe, those nations which survived, as in earlier times those tribes which survived combat, were those which displayed marked qualities of superiority in allegiance, fidelity, and social coöperation. The intensity and effectiveness of social coöperation in our own country was never so well illustrated as during the Great War. In combat between groups those groups survive which do stand out in these respects.

William James in a famous essay[1] recognizes clearly the enormous value of the fighting instinct in stimulating action to an intense effectiveness exhibited under no other circumstances, and proposes a "moral equivalent for war" — an army devoted to constructive enterprises, reclaiming the

[1] "A Moral Equivalent of War," in *Memories and Studies.*

waste places of the land, warring against poverty and disease and the like. Certainly every great reform movement has been intensely stimulated and has gathered about it the energies of men when it has become a "crusade for righteousness." Part of Theodore Roosevelt's power was in his picturesque phrasing of political issues as if they were great moral struggles. No one could forget, or fail to have his heart beat a trifle faster at Roosevelt's trumpet call in the 1912 campaign: "We stand at Armageddon and we battle for the Lord." His "Big Stick" became a potent political symbol. Astute political leaders have not failed to capitalize the fighting instinct, and any social project will enlist the wider enthusiasm and the more energetic support if it is hailed as a battle or fight against somebody or something.

In personal life also the instinct of pugnacity and the feeling of anger that goes with it seem to set loose immense floods of reserve energy. McDougall exaggerates but a trifle when he says it supplies the zest and determines the forms of all our games and recreations, and nine tenths of the world's work is done by it. "Our educational system is founded upon it; it is the social force underlying an immense amount of strenuous exertion; to it we owe in a great measure even our science, our literature, and our art; for it is a strong, perhaps an essential, element of ambition, that last infirmity of noble minds." [1] In the overcoming of obstacles, whether in the work itself, or in the difficulties that a surgeon or a scholar meets with, or in frustrations deliberately put in our way by other people, pugnacity is an invaluable stimulant and sustainer of action. Every great personality of strong convictions and dominant energy has possessed it to some extent; in characters of great moral energy it sometimes takes the form of a volcanic and virtuous wrath, as in the case of the Prophets of the Old Testament, or of later religious and social reformers who brought an earnest and bitter anger against the wrongs they saw and literally fought to overcome.

[1] McDougall: *loc. cit.*, p. 294.

The "submissive instinct." Of great importance in the social relations of men is their original tendency to find satisfaction in following, partly submitting to, or completely surrendering to a person or cause more dominating than the individual. Thorndike describes this instinct in its simplest form:

> There is an original tendency to respond to the situation, "the presence of a human being larger than one's self, of angry or mastering aspect," and to blows and restraint by submissive behavior. When weak from wounds, sickness, or fatigue, the tendency is stronger. The man who is bigger, who can outyell and outstare us, who can hit us without our hitting him, and who can keep us from moving, does originally extort a crestfallen, abashed physique and mind. Women in general are thus by original nature submissive to men in general. Every human being thus tends by original nature to arrive at a status of mastery or submission toward every other human being, and even under the more intelligent customs of civilized life somewhat of the tendency persists in many men.[1]

The impulse to follow and submit to something not ourselves and more dominating than ourselves is very strong in most men, and is called out by stimuli much less violent than those physical manifestations of power mentioned in the above quotation. Men instinctively long to be led, especially if, as happens in the case of most individuals, there is in them a marked absence of definite interest, conviction, or skill. This instinct is aroused by any sign of exceptional power, or, more generally still, by any exceptional conspicuousness, whether socially useful or not. Men follow leaders partly because men live in groups with common interests and in any large-scale organization leadership is necessary. But the power of demagogues, the faithfulness with which men will follow a bad leader as well as a good, are evidence that men find an instinctive satisfaction in submission. Self-dependence stands out as a virtue or an accomplishment precisely because most men feel so utterly at sea without any loyalty, allegiance, or devotion. Any one who has spent a summer at a

[1] Thorndike: *Educational Psychology*, briefer course, p. 34.

boy's camp will recall the helplessness of youngsters to mark out a program for themselves and to keep themselves happy on the one afternoon when there was no official program of play. Half the mischief performed on such occasions is initiated by some boy with just a little more independence and persuasiveness than the others. And it is not only among children that there is evinced an almost pathetic bewilderment and unrest in the absence of a leader. There is an equally pathetic and sometimes dangerous attachment among adults to the first sign of leadership that makes its appearance. The demoralizing authority of the ward heeler is sometimes dependent on no more trustworthy an index of real power than a booming voice, a rough *camaraderie*, and a physically "big" personality. And there are, on the other hand, instances where lack of leadership seemed to be the chief reason why certain classes of labor were unable to make their demands effective at a much earlier date than they did. In the first really big strike in the telephone industry in Boston during the autumn of 1918 success seems to have been chiefly due to the remarkable leadership of one of the young women operators, a type of leadership which seems to have appeared nowhere else in the telephone industry.[1]

The instinct of submissiveness, as has been pointed out in connection with the discussion of all the other of man's original tendencies, is not only strong, but may find its outlets in attachment, both to desirable and to undesirable persons or objects. Once aroused, attachment and submission may become as stanch as they are blind. The signs which arouse our loyalty may be and most frequently are glaring rather than important. As Trotter phrases it:

> The rational basis of the relation [following a leader] is, however, seen to be at any rate open to discussion when we consider the qualities in a leader upon which his authority so often rests, for there can be little doubt that their appeal is more generally to instinct than to reason. In ordinary politics it must be admitted that the gift of

[1] See the article by Wm. Hard in the *New Republic*, May 3, 1919.

public speaking is of more decisive value than anything else. If a man is fluent, dextrous, and ready on the platform, he possesses the one indispensable requisite for statesmanship; if in addition he has the gift of moving deeply the emotions of his hearers, his capacity for guiding the infinite complexities of national life becomes undeniable. Experience has shown that no exceptional degree of any other capacity is necessary to make a successful leader. There need be no specially arduous training, no great weight of knowledge, either of affairs or the human heart, no receptiveness to new ideas, no outlook into reality.[1]

Though these be picturesquely exaggerated statements, they do indicate the fact that the outward signs of leadership, of a conspicuously emotional sort, may be more significant in determining the attachments and loyalties of human beings, than are genuine marks of capacity in the direction of political and social affairs.

This pronounced tendency on the part of human beings to follow a lead, and anybody's lead, as it were, has the most serious dangers. It means that a man with qualities that sway men's emotions and stir their imaginations can attach to himself the profoundest loyalties for personal or class ends. The gifts of personal magnetism, of a kindly voice, an air of confidence and calmness, exuberant vitality, and a sensitivity to other people's feelings, along with some of the genuine qualities of effective and expert control of men and affairs, may be used by a demagogue as well as by a really devoted servant of the popular good, by an Alcibiades as well as by a Garibaldi, by a conquering Napoleon as well as by a Lincoln.

Our instincts of following and submission, apart from education, are as easily aroused by specious signs of social power and conspicuousness as by signs of mental effectiveness and genuine altruistic interest. The exploitation of these tendencies by selfish leaders is therefore particularly easy. The large circulation of the "yellow press," the power in politics of the unscrupulous, the selfish, and the second-rate, are symptoms of how men's natural tendency to follow has been

[1] Trotter, p. 116.

played upon in support of plans and ambitions which would not be sanctioned by their reason. The genius for leadership has been exhibited in criminal gangs, in conquests and in fanaticism, as well as in the promotion of good government, of better labor conditions and better education.

But progress in these last-named is dependent on the utilization of men's submissiveness by leaders interested in the promotion of desirable social enterprises. While men may be so easily led, they are responsive to leadership in good directions as well as bad. No great social movements, the freeing of slaves, the gaining of universal suffrage, the bettering of factory conditions, freedom of thought and action, could have gained headway if men had been born unwilling to follow. There are (see chapter IX) ineradicable differences in capacity between men, and if the uninformed and the socially helpless could not be aroused to follow those great both in mind and magnanimity, it is difficult to see how the lot of mankind ever could have, or ever can improve. A good leader may make men support, out of instinctive loyalty, purposes and plans which, if they completely understood them, they would support out of reason. Up to the present most people have been, and will probably remain for a long time to come, too ill-educated or too poorly endowed by nature to understand the bearings of the great social movements in which they are involved. In consequence, it is a matter of congratulation that their instinct of submission can be utilized in the interests of their welfare which they frequently not only do not know how to obtain, but do not understand. The Roman populace, enchanted by Augustus, follow him to greatness, without comprehending the imperial destiny which they are helping to build. The barbarian hordes affectionately following the lead of Charlemagne incidentally help to build the whole edifice of European civilization.

Men display qualities of leadership. The obverse of man's tendency to follow a lead is, of course, his tendency to take it. Individuals tend to display persistently and conspicuously

just those qualities which will win them the allegiance of others.

> The instinct of self-display is manifested by many of the higher social or gregarious animals. . . . Perhaps among mammals the horse displays it most clearly. The muscles of all parts are strongly innervated, the creature holds himself erect, his neck is arched, his tail lifted, his motions become superfluously vigorous and extensive, he lifts his hoofs high in air as he parades before the eyes of his fellows. . . . Many children clearly exhibit this instinct of self-display; before they can walk or talk the impulse finds its satisfaction in the admiring gaze or plaudits of the family circle as each new acquirement is practiced; a little later it is still more clearly expressed by the frequently repeated command, "See me do this," or "See how well I can do so and so"; and for many a child more than half the delight of riding on a pony, of wearing a new coat, consists in the satisfaction of this instinct, and vanishes if there be no spectators.[1]

Individuals thus instinctively love to stand out from their fellows, to outdistance and outclass them. And the qualities of leadership are not infrequently stimulated by this competition with others, for place, power, distinction. To win the allegiance and loyal affection of men means that one's own personality is enhanced; one stands out as a man of affairs, a social or political leader, a guide to others in action or thought. As has already been pointed out, the qualities that will win the submission and loyalty of others vary widely. In the case of one man it may be a charming smile and a gift of saying striking and stirring rather than significant things. In the case of another it may be his air of immense confidence, restraint, and reserve. It may be brute force or a terrible earnestness; it may even be, as in the case of certain religious reformers, extraordinary gentleness. Garibaldi "inspired among men of the most various temperaments love that nothing could shake, and devotion that fell little short of idolatry." "He enjoyed the worship and cast the spell of a legendary hero." Alcibiades charmed, despite the patent evil he wrought, by his magical personal beauty and grace.

[1] McDougall: *loc. cit.*, pp. 62–64.

Vandamme said of Napoleon: "That devil of a man exercises on me a fascination that I cannot explain to myself, and in such a degree that, though I fear neither God nor devil, when I am in his presence I am ready to tremble like a child, and he could make me go through the eye of a needle to throw myself into the fire." Augereau is stupefied at their first meeting, and confesses afterwards that "this little devil of a general" has inspired him with awe.[1]

Men's qualities of leadership depend, however, not only on their personal charm, but on certain seeming or genuine symptoms of effectiveness. Evidences of strong determination, of a sweeping imagination, of calm, of confidence, of enthusiasm, of qualities possessed by the vast majority only in minor degrees, win men's admiration and devotion because they are associated with the ability to accomplish great ends, to do the unusual, to succeed where most people fail. Most men are so conscious of their limitations and the difficulties of any enterprise which they undertake that at any sign of exceptional talent, whether real or apparent, they will commit their respect, their energies, and sometimes, as in the case of a religious crusade, their lives.

For good or evil, the possession, the cultivation, and the exhibition of the qualities of leadership give men enormous power. There was in the nineteenth century a historical fashion, brilliantly exemplified by Carlyle, to assume that history was made by great men. Latterly, there has been wide dissent from this simplification of the processes of history, but it is clear that innovations must be started by individuals, and that a powerful leader is a matchless instrument for initiating, and getting wide and enthusiastic support for changes, whether good or bad. To quote Carlyle's eloquent exaggeration:

> For, as I take it, Universal History, the history of what man has accomplished in this world, is at the bottom the History of the Great Men who have worked here. They were the leaders of men, . . . the

[1] See chapter XXI on "Personality" in Ross's *Social Control*.

creators of whatsoever the general mass of men contrived to do or to attain; all things that we see standing accomplished in the world are properly the outer material result, the practical realization and embodiment, of thoughts that dwelt in the Great Men sent into the world: the soul of the whole world's history, it may justly be considered, was the history of these. . . . Could we see *them* well, we should get some glimpses into the very marrow of the world's history.[1]

Later Nietzsche made much of this same idea, of the Superman striding through the world and changing its destiny, although in Nietzsche the Superman was an end in himself rather than the servant of the world in which he lived.

To most historical writers to-day the forces at work in history are much too complex to be dismissed with any such simple melodrama. But there remain striking testimonies of the influence of leaders. The sweep of Mohammedanism into Europe was initiated by the burning and contagious zeal of one religious enthusiast. The campaign against slavery in this country assumed large proportions through the strenuous leadership of the Garrisons and the Wendell Phillipses. In our own day we have seen the same phenomenon; the great political and social changes of the last generation have all had their special advocates and leaders who, if they were merely expressing the "spirit of the times," yet did give that spirit expression. Every reform or revolution has its leading spirits. That leadership is not the one essential goes without saying; there have been great guides of repeatedly lost causes. But many great causes may have been lost through the want of good leadership.

In contemporary life leadership is not always directly personal, but is carried on through the medium of the newspapers and periodicals. But this merely means that a leader may reach a wider audience; he reaches thousands through picture and print, instead of hundreds by word of mouth.

Qualities of leadership may be utilized in the support of the customary or the established, as well as in initiation and

[1] Carlyle: *Heroes and Hero-Worship*, Lecture I.

support of the novel. People ape the great, or those that pass for great, in manners and morals. The words of a distinguished public man have prestige in the maintenance of the established. Men *will* follow, and if the socially conspicuous lead them along the ways of the established, they will follow there as readily and, being creatures of habit, often more readily than along new paths. The immense following among the lower social classes that the Conservative Party had in England all through the nineteenth century in the face of proposed changes that would have bettered their own conditions, is an interesting illustration of this. This is partly because the influence of leaders is dependent on their social status as well as their personal qualities. The opinions of inventors and big business men are taken with eagerness and credulity even when touching matters outside their own field. A man is made, as it were, *ipso facto*, a leader, by being rich, powerful, of a socially distinguished family, or the director of a large industry, although he may have, besides, qualities of leadership that do not depend on his social position.

Man pities and protects weak and suffering things. Nearly all human beings exhibit a tendency to protect weak and suffering things. This impulse is closely related to, and probably has its origin in the parental instinct, more common, of course, in women than in men. The feeling of affectionate pity and the impulse to rescue from pain are most intense when the distressed thing is a child, and particularly one's own. One of the most poignant instances extant is the speech of Andromache, one of the Trojan women in Euripides's play of that name, to her child who is about to be slain by the Greeks:

> And none to pity thee! . . . Thou little thing,
> That curlest in my arms, what sweet scents cling
> All round thy neck! Beloved; can it be
> All nothing, that this bosom cradled thee
> And fostered; all the weary nights wherethrough
> I watched upon thy sickness, till I grew
> Wasted with watching? Kiss me. This one time;
> Not ever again. Put up thine arms and climb

> About my neck; now kiss me, lips to lips . . .
> O ye have found an anguish that outstrips
> All tortures of the East, ye gentle Greeks!
> Why will ye slay this innocent that seeks
> No wrong? . . .[1]

But the "tender emotion" as McDougall calls it, is aroused by other children than one's own, and by others than children. It is called out particularly by things that are by nature helpless and delicate, but may be aroused by adults who are placed in situations where they are suffering and powerless. Samson, shorn of his strength, has been a traditional occasion for pathos. The sick, the bereaved, the down-and-outers, the failures, the forlorn and broken-hearted, call out in most men an impulse to befriend and protect. Those who have been dealt with unjustly or severely by their associates and society and who have no redress, the poverty-stricken, the criminal who has been punished and remains an exile, the maimed and deformed, the widow and orphan, all these, arouse, apart from the restraining force exercised by other instincts and habits, such as anger and disgust, a natural tendency to pity and aid.

The parental instinct in its direct and primitive form is responsible for the closeness of family relations, a most important consideration in the case of humans who have, as already discussed, a long period of infancy during which they are absolutely dependent on their elders. In the higher species, writes McDougall, "The protection and cherishing of the young is the constant and all-absorbing occupation of the mother, to which she devotes all her energies, and in the course of which she will at any time undergo privation, pain, and death. The instinct becomes more powerful than any other, and can override any other, even fear itself." [2] Wherever the power of the parental instinct has waned, as in Greek and Roman society, the civilization in which that degeneration occurred was subjected to rapid decay.[3]

[1] Euripides: *Trojan Women* (Gilbert Murray translation), p. 49.
[2] McDougall: *loc. cit.*, p. 67. [3] *Cf. Ibid.*, p. 271.

The parental instinct in its more general form of pity and protectiveness toward all weak and suffering things is, in the minds of many moralists, the origin of all altruistic sentiments and actions, and at the same time the moral indignation which insists on the punishment of wrong-doers. It is clearly apparent in such movements as the Societies for the Prevention of Cruelty to Children or to Animals, the anti-vivisection crusade, and the like. But according to such a distinguished moralist as John Stuart Mill, the whole system of justice and punishment has its origins in this tender feeling for those who have been wronged.

Fear. Fear is one of the least specialized of human traits, being called out in a great variety of situations, and resulting in a great variety of responses. The most obvious symptom of fear is flight, but there may be a dozen other responses. "Crouching, clinging, starting, trembling, remaining stock still, covering the eyes, opening the mouth and eyes, a temporary cessation followed by an acceleration of the heart-beat, difficulty in breathing, paleness, sweating, and erection of the hair are responses of which certain ones seem bound, apart from training, to certain situations, such as sudden loud noises or clutches, the sudden appearance of strange objects, thunder and lightning, loneliness and the dark." [1]

In general, the marked physical reactions and deep emotional disturbance that we call fear are aroused by anything loud or strange, or that has outward signs of possible danger to ourselves, such as a large wild animal approaching us. In civilized man, whose life is comparatively sheltered, there are considerable individual differences in susceptibility to fear, and in the intensity with which it controls the individual. But there are certain typical situations that call it forth. Among young children, and not much less so among adults, fear is aroused by any sudden loud noise, by strange men and strange animals, black things and dark places, "vermin," such as spiders and snakes, among a great many adults fear of

[1] Thorndike: *loc. cit.*, p. 20.

high places, and, among a few agaraphobia or fear of open spaces.[1] The deep-seatedness of fear has been explained by the fact that most of the things which instinctively arouse fear were, in primitive life, the source of very real danger and that under those conditions, where it was absolutely essential to beware of the unfamiliar and the strange, only those animals survived who were equipped with such a protective mechanism as fear provides.

The instinct of fear has important social consequences, especially as its influence is not infrequently clothed over with reasons. In savage life, as McDougall points out, "fear of physical punishment inflicted by the anger of his fellows must have been the great agent of discipline of primitive man; through such fear he must first have learned to control and regulate his impulses in conformity with the needs of social life." [2] In contemporary society fear is not so explicitly present, but it is still a deep-seated power over men's lives. Fear of punishment may not be the only reason why citizens remain law-abiding, but it is an important control over many of the less intelligent and the less socially minded. In an unideal society there are still many who will do as much evil as is "within the law," and fear of the consequences of failing a course is among some contemporary undergraduates still an indispensable stimulus of study.

Fear plays a part, however, not only in preventing people from breaking the law, but often from living their lives freely and after their own convictions. As has been strikingly pointed out by Hilaire Belloc and Hobson, one of the greatest evils of our present hit-or-miss methods of employment is the fear of "losing his job," the uncomfortable feeling of insecurity often felt by the workingman who, having so frequently nothing to store up against a rainy day, lives in perpetual fear of sickness or discharge.

In earlier times fear of the consequences of expressing dis-

[1] For a discussion of these, see James: *Psychology*, vol. II, p. 415 ff.
[2] McDougall: *loc. cit.*, p. 303.

sent from established opinions and beliefs was one of the chief sources of social inertia. Where excommunication, torture, and death followed dissent, it is not surprising that men feared to be dissenters. In contemporary society under normal conditions men have much less to fear in the way of punishment, but may accept the traditional and conventional because they fear the consequences of being different, even if those consequences are not anything more serious than a personal snub.

While men fear to dissent because of the disapproval to which they may be subjected, dissent, the novel and strange in action and opinion are themselves feared by most men because of the unknown and unpredictable consequences to which they may lead. Men were at first afraid of the steam-engine and the locomotive. Men still fear novel political and social ideas before they can possibly understand what they have to be afraid of. The fact that thought so continually turns up the novel and the strange is, according to Bertrand Russell, precisely the reason why most men are afraid to think. And fear of the novel, the strange, the unaccustomed is, as in the case of many other instincts, a perfectly natural means of protection that would otherwise have to be sought by elaborate processes of reason. In what we call prudence, caution, and care, fear undoubtedly plays some part, and Plato long ago pointed out it is only the fool, not the brave man, who is utterly unafraid.[1]

Psychologists may be said to differ largely as to the utility of fear. They are nearly all agreed that in the forest life which was man's originally, fear had its specific marked advantages. Open spaces, dark caverns, loud noises were undoubtedly associated very frequently with danger to the primitive savage, and an instinctive recoil from these centers of disaster was undoubtedly of survival value. But there is an increasing tendency to discount the utility of fear in civilized life. "Many of the manifestations of fear must be

[1] *Protagoras.*

regarded as pathological, rather than useful. . . . A certain amount of timidity obviously adapts us to the world we live in, but the *fear paroxysm* is surely altogether harmful to him who is its prey." [1]

Fear and worry, which is a continuous form of fear, in general hinder action rather than promote it. In its extreme form it brings about complete paralysis, as in the case of terror-stricken hunted animals. When humans or animals are utterly terrified even death may result. This fact that fear hinders action, sometimes most seriously, seems to some philosophic writers, especially Bertrand Russell, a key fact for social life. "No institution," he writes, "inspired by fear, can further life." [2] And in another connection: "In the world as we have been imagining it, economic fear will be removed out of life. . . . No one will be haunted by the dread of poverty. . . . The unsuccessful professional man will not live in terror lest his children should sink in the scale. . . . In such a world, most of the terrors that lurk in the background of men's minds will no longer exist." [3] "In the daily lives of most men and women, fear plays a *greater part than hope. It is not so that life should be lived.*" [4]

Love and hate. All human relations are qualified by the presence, more or less intense, of emotion. Human beings are not merely so many items that are coldly counted and handled, as one counts and handles pounds of sugar and pieces of machinery. A man may thus regard human beings when he deals with them in mass, or thinks of them in statistical tables or in the routine of a government office. But human beings experience some emotional accompaniment in their dealings with individuals, especially when face to face, and experience more especially, in varying degrees, the emotions of love or hate. These terms are here used in the general sense of the receptive, positive, or expansive attitude and the

[1] James: *Psychology*, vol. II, p. 419.
[2] Bertrand Russell: *Why Men Fight*, p. 180.
[3] Russell: *Proposed Roads to Freedom*, p. 203.
[4] *Ibid.*, p. 186. (Italics mine.)

cold, negative, repellent, and contractual attitude toward others. These may both be intense and consciously noted, as in the case of long-cherished and deep affections or antipathies to different individuals. They may appear as a half-realized sense of pleasure in the mere presence and poise of a person, or a curious sense of discomfort and irritation at his appearance, his voice, or his gesture. These attitudes, even when slight, color and qualify our relations with other individuals. They may, in their larger manifestations, play so large a part, that they must be considered separately, and in detail.

Love. Love, used in this broad sense, varies in intensity. It may be nothing more — it certainly frequently starts as nothing more — than the feeling, so native as to be fairly called instinctive, of common sympathy, fellow feeling, immediate affinity with another. The psychological origins of this disposition have already been noted in connection with man's tendency to experience sympathetically immediately the emotions of others. Every business man, lawyer, teacher, any one who comes much into contact with a wide variety of people, knows how, antecedent to any experience with an individual's capacities or talents, or even before one had a chance to draw any inferences from a person's walk, his bearing, or his clothing, one may register an immediate like or dislike. Every one has had the experience in crossing a college campus or riding in a train or street car of noting, in passing some one whom one has never seen before, an immediate reaction of good-will and affection. This has been charmingly expressed by a well-known English poet:

"The street sounds to the soldiers' tread,
And out we troop to see;
A single redcoat turns his head,
He turns and looks at me.

"My man, from sky to sky 's so far,
We never crossed before;
Such leagues apart the world's ends are,
We're like to meet no more.

"What thoughts at heart have you and I,
We cannot stop to tell;
But dead or living, drunk or dry,
Soldier, I wish you well." [1]

All affection for individuals probably starts in this immediate instinctive liking. "The first note that gives sociability a personal quality and raises the comrade into an incipient friend is doubtless sensuous affinity. Whatever reaction we may eventually make on an impression, after it has had time to soak in and to merge in some practical or intellectual habit, its first assault is always on the senses, and no sense is an indifferent organ. Each has, so to speak, its congenial rate of vibration, and gives its stimuli a varying welcome. Little as we may attend to these instinctive hospitalities of sense, they betray themselves in unjustified likes and dislikes felt for casual persons and things, in the *je ne sais quoi* that makes instinctive sympathy." [2] From this immediate instinctive liking it may rise to deep personal attachments, strikingly manifested in friendship and love between the sexes, both immemorially celebrated by poets and novelists. Love is aroused chiefly by persons, and among persons, especially in the case of sexual love, most frequently by more or less physical beauty and attractiveness. But affection may be aroused and is certainly sustained by other than merely physical qualities.

It is provoked by what we call personal or social charm, a genuine kindliness of manner, an open-handed sincerity and frankness, considerateness, gentleness, whimsicality. Which particular social graces will win our affections depends of course on our own interests, equipment, and fund of instinctive and acquired sympathies. Popular psychology has in various proverbs hit at and not entirely missed some of the obvious and contradictory elements: "Opposites attract," "Birds of a feather flock together," and so on. Intellectual

[1] A. E. Housman: *The Shropshire Lad* (John Lane edition), p. 32.
[2] Santayana: *Reason in Society*, p. 151.

qualities, in persons of marked intellectual interests, will also sustain friendship and deepen an instinctive liking. Friendships thus begin in accident and are continued through community of interest. It is to be questioned whether merely striking intellectual qualities initiate a friendship. They may command admiration and respect, but liking, friendship, and love have a more emotional and personal basis.

This same warm affectionate appreciation that nearly all people have for other persons, fewer people — great poets, philosophers, and enthusiastic leaders of men — have for causes, institutions, and ideas. One feels in the works of great thinkers the same warmth and loyalty to ideas and causes that ordinary people display toward their friends. Plato has given for all time the progress of love from attachment to a single individual through to institutions, ideas, and what he called mystically the idea of beauty itself.

> For he who would proceed rightly in this matter should begin in youth to turn to beautiful forms; and first, if his instructor guide him rightly, he should learn to love one such form only — out of that he should create fair thoughts, and soon he will himself perceive that the beauty of one form is truly related to the beauty of another, and then if beauty in general is his pursuit, how foolish would he be not to recognize that the beauty in every form is one and the same! And when he perceives this he will abate his violent love of the one, which he will despise and deem a small thing, and will become a lover of all beautiful forms; this will lead him on to consider that the beauty of the mind is more honorable than the beauty of the outward form. So that if a virtuous soul have but a little comeliness, he will be content to love and tend him . . . until his beloved is compelled to contemplate and see the beauty of institutions and laws, and understand that all is of one kindred; and that personal beauty is only a trifle; and after laws and institutions, he will lead him on to the sciences, that he may see their beauty . . . until at length he grows and waxes strong, and at last the vision is revealed to him of a single science which is the science of beauty everywhere.[1]

There have been again great scientists who have had the same warm affectionate devotion for their subject-matter

[1] Plato: *Symposium* (Jowett translation), p. 502.

that most men display toward persons. There are scholars almost literally in love with their subjects. There have been a greater number whose capacity for affection has extended to include the whole human race, and, indeed, all animate creation. Such a type of character is beautifully exemplified in Saint Francis of Assisi:

> In Francis all living creatures may truly be said to have found a friend and benefactor; his great heart embraced all the men and women who sought his sympathy and advice, and his pity for the dumb helplessness of suffering animals was deep and true. He would lift the worm from his path lest a careless foot should crush it, and would encourage his "little sister grasshopper" to perch upon his hand, and chirp her song to his gentle ear. He tamed the fierce wolf of Gubbio, and fed the robins with crumbs from his table.[1]

And Christ stands, of course, in the Christian world, as the supreme symbol of love for mankind.

In ordinary men it is this generalized affection which is at the basis of any sustained interest in philanthropic or altruistic enterprises. No less than a large and generous affection for humanity is required to enable men to endure for long the dreariness and disillusion so often incident to philanthropic work, the conflicts and disappointments of public administration. Certainly this is true of the first rank of statesmen; no characterization of Lincoln fails to emphasize his essential humanity and tenderness.

Disinterested love for humanity is normally most intense in the adolescent.[2] The pressure of private concerns, of one's narrowing interest in one's own career, one's own family, and small circle of friends, the restriction of one's sympathies by fixed habits and circumscribed experience, all tend to dampen by middle age the ardor of the man who as an undergraduate at eighteen set out to make the world "a better place to live in." But more effective in dampening enthusiasm is the disillusion and weariness that set in after a period of exuberant

[1] Goff and Kerr-Lawson: *Assisi of Saint Francis*, p. 121.

[2] Simeon Strunsky has somewhere remarked: "At eighteen a man is interested in causes; at twenty-eight in commutation tickets."

and romantic benevolence to mankind in general. "We call pessimists," writes a contemporary French philosopher, "those who are in reality only disillusioned optimists." [1] So the cynic may be fairly described as a disheartened lover of men. It is only an unusual gift of affectionate good-will that enables mature men, after rough and disillusioning experiences in public life, to maintain without sentimentality a genuine and persistent interest in the welfare of others. Those in whom the fund of human kindness is slender will, and easily do, become cynical and hard.

The attitude of affection for others is profoundly influential in stimulating our interest in specific individuals, and modifying our attitudes toward them. We cannot help being more interested in those for whom we entertain affection than in those to whom we are indifferent. In the same way our judgments of our own friends, families, and children are qualified by our affection for them. Parents and lovers are notoriously partial, and a fair judgment of the work of our friends demands unusual clarity, determination, and poise.

In a larger way the generally friendly attitude towards others, genial expansive receptivity, is at the basis of what is called "charity for human weakness." The gentle cynic can see and tolerate other men's weaknesses:

> "He knows how much of what men paint themselves
> Would blister in the light of what they are;
> He sees how much of what was great now shares
> An eminence transformed and ordinary;
> He knows too much of what the world has hushed
> In others, to be loud now for himself." [2]

The devoutly religious have displayed keen psychological insight when they made man's salvation dependent on God's charity, and identified, as did Dante, charity with love.[3]

[1] Georges Sorel: *Reflection on Violence* (English translation), p. 9.

[2] Edwin Arlington Robinson: "Ben Jonson Entertains a Man from Stratford," in his *Man Against the Sky*.

[3] "Love and the gentle heart are one and the same thing." *The New Life*, XX (son XI) *Amore e cor gentile son una cosa*. To Dante the spontaneous impulse to love is the basis of all altruism. To feel and to follow this impulse is to be truly noble, to have a "*cor gentile*," a gentle heart.

Hate. Hate may be described as an extreme form of disaffection usually provoked by some marked interference with our activities, desires, or ideals. But in less intense degree the negative feeling towards others may be provoked immediately and unmistakably by most casual evidence of voice, manner, or bearing. Such immediate revulsions of feeling contrast with the instances of "instinctive sympathy" previously cited, and are as direct and uncontrollable. Even kindly disposed persons cannot help experiencing in the presence of some persons they have never seen before, a half-conscious thrill of repulsion or a dislike colored with dread. A shifting gaze, a noticeably pretentious manner, a marked obsequiousness, a grating voice, a chillness of demeanor, a physical deformity, these, however little they may have to do with a person's genuine qualities, do affect our attitudes toward them. As the familiar verse has it:

> "I do not like you, Dr. Fell,
> The reason why I cannot tell,
> But this I know, and know full well,
> I do not like you, Dr. Fell."

We may later revise our estimates, but the initial reaction is made, and often remains as a subconscious qualification of our general attitude toward another. People of worldly experience learn to trust their first reactions, to "size a man up" almost intuitively, and to be surprised if their first impressions go astray.

From this merely instinctive revulsion the negative attitude may rise to that terrible form of destructive antipathy which is "hate," as popularly understood. In between lie degrees of dislike depending partly on the strength of the initial antipathy, but equally so on the degree to which others, whether persons, institutions, or ideas, interfere with our activities, desires, or ideals. The man who seriously obstructs our love, our pleasure, or our ambition, or who tries to do so, provokes hate, and its concomitants of jealousy, rage, and pugnacity. It is not only that we dislike the mere presence

of the person (in the opposite case the mere presence of the beloved object is a joy), but we dislike it for what it portends in danger and threat to ourselves. The more serious the evil or disaster for which a person comes to stand, the more violent the hatred for him, despite his personal fascinations. The villain is not infrequently a "damned smiling villain."

The provocation of hate is complicated by the fact that it is closely associated with fear. We dislike those who threaten our happiness partly because we fear them. And we fear, as was pointed out in more detail in the discussion of that powerful human trait, the unfamiliar, the strange, the startling, the unexpected. The facility with which sensational newspapers can work up in an ignorant population a hate for foreign nations, especially those of a totally alien civilization, is made possible by the fear which these uninformed readers can feel at the dangerous possibilities of mysterious foreign hordes. The fomenting of fear is in nearly all such cases a prerequisite to the fomenting of hate. And the promotion of hate has historically been one of the frequent ingredients of international conflicts.

Like love, hate is profoundly influential in modifying our interest in persons and situations. To dislike a person moderately is, in his absence, to be indifferent to him. To dislike him intensely, in a sense increases our interest in him, though perversely. Just as we wish the beloved person to succeed, to gain honor and reputation and wealth, so we long for and rejoice in the downfall and discomfiture of our enemies. Thus writes the Psalmist:

> Arise, O Lord, save me, my God; for thou has smitten all mine enemies upon the cheekbone; thou hast broken the teeth of the ungodly. . . .
>
> Thou hast also given me the necks of mine enemies that I might destroy those that hate me.

Hate may be directed against persons, and usually it is. But hatred may be directed against institutions and ideas as well. For many persons it will be impossible for a decade to

listen to German music or the German language, so closely have these become associated in their minds with ideas and practices which they detest. To a dogmatic Calvinist in the sixteenth century, both an heretical creed and its practitioners, were objects of abomination. Disappointed men may take out in a spleen and hatred of mankind their personal pique and balked desires.

Great hates may be present at the same time and in the same persons as great loves. Indeed for some persons strength in the one passion is impossible without a corresponding strength in its opposite. We cannot help hating, more or less, not only those who interfere with our own welfare, but with the welfare of those who, being dear to us, have become, as we say, a part of our lives. Thus writes Bertrand Russell in the introduction to his treatment of some of the radical social tendencies of our own day:

> Whatever bitterness or hate may be found in the movements which we are to examine, it is not bitterness or hate, but love, that is their mainspring. It is difficult not to hate those who torture the objects of our love. Though difficult, it is not impossible; but it requires a breadth of outlook, and a comprehensiveness of understanding which are not easy to preserve amid a desperate contest.[1]

Hate may thus be, as great religious and social reformers illustrate, invoked on the side of good as well as evil. The prophets burned with a "righteous indignation." But hate is a violent and consuming passion, bent on destroying obstacles rather than solving problems. It consumes in hatred for individuals such energy as might more expeditiously be devoted to the improvement of the circumstances which make people do the mean or small or blind actions which arouse our wrath. The complete meekness and humility preached by Christ have not been taken literally by the natively pugnacious peoples of Europe. But as James says suggestively:

[1] Russell: *Proposed Roads to Freedom*, pp. xvii–xviii.

"Love your enemies!" Mark you not simply those who do not happen to be your friends, but your *enemies*, your positive and active enemies. Either this is a mere Oriental hyperbole, a bit of verbal extravagance, meaning only that we should, in so far as we can, abate our animosities, or else it is sincere and literal. Outside of certain cases of intimate individual relation, it seldom has been taken literally. Yet it makes one ask the question: Can there in general be a level of emotion so unifying, so obliterative of differences between man and man, that even enmity may come to be an irrelevant circumstance and fail to inhibit the friendlier interests aroused. If positive well-wishing could attain so supreme a degree of excitement, those who were swayed by it might well seem superhuman beings. Their life would be morally discrete from the lives of other men, and there is no saying . . . what the effects might be: they might conceivably transform the world.[1]

Dislikes, disagreements, native antipathies are not to be abolished, human differences being ineradicable and human interests, even in an ideal society, being in conflict. But a keener appreciation of other viewpoints, which is possible through education, a less violent concern with one's own personal interests to the exclusion of all others, may greatly reduce the amount of hate current in the world, and free men's energies in passions more positive in their fruits.

[1] James: *Varieties of Religious Experience*, p. 283.

CHAPTER VII

THE DEMAND FOR PRIVACY AND INDIVIDUALITY

Privacy and solitude. Although one of man's most powerful tendencies, as has already been pointed out, is his desire to be with his fellows, this desire is not unqualified. Just as men can be satiated with too much eating, and irritated by too much inactivity, so men become "fed up" with companionship. The demand for solitude and privacy is thus fundamentally a physiological demand, like the demand for rest. "The world is too much with us," especially the human world. Companionship, even of the most desirable kind, exhausts nervous energy, and may become positively fatiguing and painful. To crave solitude is thus not a sign of man's unsociability, but a sign merely that sociability, like any other human tendency, becomes annoying, if too long or too strenuously indulged. Much of the neurasthenia of city life has been attributed to the continual contact with other people, and the total inability of most city dwellers to secure privacy for any considerable length of time. In some people a lifelong habit of close contact with large numbers of people makes them abnormally gregarious, so that solitude, the normal method of recuperation from companionship, becomes unbearable. Few city dwellers have not felt after a period of isolation in some remote country place the need for the social stimulus of the city. But a normal human life demands a certain proportion of solitude just as much as it demands the companionship of others.

With the spread of education and the general enhancement of the sense of personal selfhood and individuality among large numbers of people, the demand for privacy has increased. The modern reader is shocked to discover in the literature of the Elizabethan period the amazing lack of a

sense of privacy there exhibited. In contemporary society this sense and the possibility of its satisfaction are variously displayed on different economic and social levels. In the congested life of the tenements it is almost impossible, and many social evils are to be traced to the promiscuous mingling of large families (and sometimes additional boarders) in congested quarters.

The demand for privacy and solitude becomes acute among people who do a great deal of mental work. "Man," says Nietzsche, "cannot think in a herd," and the thinker has traditionally been pictured as a solitary man. This is because quiet seems to be, for most men, an essential condition of really creative thought. There are some men who find it impossible to write when there is another person, even one of whom they are fond, in the same room. "No man," writes Mr. Graham Wallas, "is likely to produce creative thoughts (either consciously or subconsciously) if he is constantly interrupted by irregular noises." Constant association with other people means, moreover, continual distraction by conversation which seriously interrupts a consecutive train of thought. The insistence in public and college reading rooms on absolute quiet is a device for securing as nearly as may be privacy in intellectual work.

Privacy is again demanded as a matter of emotional protection in individuals in whom there is a highly sensitive development of personal selfhood. We like to keep our concerns to ourselves, or to share them only with those with whom we have a marked community of interest and feeling. Children love to "have secrets they won't tell," and older people, especially sensitive and intelligent ones, feel a peculiar sense of irritation at having their personal affairs and feelings publicly displayed. Nearly every one must recall occasions where he was vividly communicative and loquacious with a friend, only to relapse into a clam-like silence on the entry of a third person. This is primarily due to the fact that while men are by nature gregarious, their gregariousness early becomes special-

ized and aroused exclusively by people for whom they develop a sense of personal affection and common sympathy. Any intrusion from without this circle becomes an intrusion upon privacy.

Satisfaction in personal possession: the acquisitive instinct. An almost universal human trait of considerable social consequence is the satisfaction men experience in having objects that are their own. Both animals and humans, apart from training, display a tendency to get and hold objects. This tendency may take extreme forms, as in the case of miserliness or kleptomania. It is evidenced in special ways in the collections that children, and some grown-ups, make of miscellaneous objects without any particular use, and with no particular æsthetic value.

The objects which satisfy this instinct of possession may include material goods, family, or larger groups. In primitive tribes under the patriarchal system, the patriarch practically owns the tribe. Our laws not so long ago recognized the marriage relation as a state in which the wife is possessed or owned by the husband.

Possession gives the owner various kinds of satisfaction. The instinctive satisfaction in possession itself may be quite irrespective of the values of the objects owned, and deprivation may be fiercely resisted out of all proportion to the value of the objects. Especially will this be the case if the object possessed has become surrounded with other emotional attachments, so that an individual may be as bitterly chagrined and piqued by being deprived of some slight memoir or keepsake as of a large sum of money. In the same way the fighting spirit of a whole tribe or nation may be aroused by the invasion or seizure of a small and unimportant bit of land, or by the chance of its possession.

The instinctive sense of satisfaction, as in the last mentioned case is enhanced by the sense of importance which comes from possession, and which enhances one's own individuality and personality. A man's vast holdings in wealth,

land, factories, machinery, or private estates is, in a sense, regarded by him as an extension of his personality. He is confirmed in this impression because it is so regarded by his neighbors and the whole social group. A great landowner is a celebrity throughout the countryside, and, as Mr. Veblen points out, a large part of the luxurious display and expenditure of the leisure classes is their way of publicly and conspicuously indicating the amount of their possessions.

As in the case of any other strong native tendency, interference with the instinct of acquisition, whether displayed by the individual or the group, provokes often fierce anger and bitter combat. The history of wars of aggrandizement throughout the history of Europe are testimonies to the efficacy of this instinct at least in the initiation of war.

The progress of civilization beyond its earliest states is held, by some sociologists and economists, to be ascribed to the power of the acquisitive instinct. The acquisition of material wealth or capital, the development of the institution of private property with its concomitant individual development of land and natural resources is maintained by Lester Ward to be of paramount importance in social advance:

> . . . Objects of desire multiplied themselves and their possession became an end of effort. Slowly the notion of property came into being and in acquiring this, as history shows, the larger share of all human energy has been absorbed. The ruling passion has for a time long anterior to any recorded annals always been proprietary acquisition. . . . Both the passion and the means of satisfying it were conditions to the development of society itself, and rightly viewed they have also been leading factors in civilization.[1]

There are many other motives to activity than acquisition, but there are many evidences of its intense operation even in modern society. Many men go on working long after they have money enough to enable them to live in comfort, merely for the further satisfaction of this impulse. "While in the course of satisfaction of most other desires, the point of satiety

[1] Lester Ward: *The Psychic Factors of Civilization*, p. 156.

is soon reached, the demands of this one grow greater without limit, so that it knows no satiety." [1]

The power of this tendency to personal acquisition and possession seems an obstacle to all thoroughly communistic forms of political and social organization. The conception of a state where nobody owns anything, but where all is owned in common — an idea which has been repeated in many modern forms of socialism and communism, fails to note this powerful human difficulty. Many socialist writers, it must be noted, however, point out that they wish social ownership of the means of production rather than of every item of personal property, such as books, clothing, and the like.

Individuality in opinion and belief. Men frequently display with regard to their opinions and beliefs the same passionate attachment that they exhibit with regard to their physical possessions. Like the latter, these come to be regarded as an extension of the individual's personality, and the same tenacious defense may be made of them as of a house, land, or money.

Individual opinions and beliefs are not themselves possessions, from a social point of view, so much as is the right to express them. A man's private opinion may influence his own conduct; his conduct itself may be an expression of opinion. But unless an opinion is communicated, it cannot influence any one else's conduct, and society has never been much concerned about opinions that an individual harbored strictly in his own bosom. Silence, socially, is as good as assent. The insistence on the right to one's own opinions becomes, therefore, an insistence on the right or the freedom to express them.[2] This right is cherished in varying degrees by different individuals in different ages. It becomes pronounced in persons in whom there is marked development of individuality, and, in general, where, as in Anglo-Saxon

[1] McDougall: *loc. cit.*, p. 323.

[2] Beliefs and opinions may come to be regarded as important personal possessions in themselves, as in the case of rival claimants to some theory or idea, as in the case of Leibnitz's and Newton's dispute over the calculus.

countries, a social and political tradition of liberty and individuality has become very powerful.

Individuality in opinion and belief becomes critical chiefly when the opinions and beliefs expressed are at variance with those generally current among the group. For reasons already discussed in connection with man's instinctive gregariousness and the emotional sway which habits of thought have over men, dissent is regarded with suspicion. Especially is this the case where the dissenting opinions have to do with new social organization and custom. The psychological causes of this opposition are various, but include among other things a positive feeling of fear.

> It is only recently that men have been abandoning the belief that the welfare of a state depends on rigid stability and on the preservation of its traditions and institutions unchanged. Wherever that belief prevails, novel opinions are felt to be dangerous as well as annoying, and any one who asks inconvenient questions about the why and the wherefore of accepted principles is considered a pestilent person.[1]

Throughout history there has been a long struggle for freedom of thought and discussion, and there have been great landmarks in the degree with which freedom was attained, and the fields wherein it was permitted. For a long time in the history of Europe, dissent from the prevailing opinion on religious matters was regarded both as abominable and socially dangerous, and was severely punished. Since the middle of the nineteenth century there has been no legal punishment provided for dissent from established opinions in religion, although penalties for heterodoxy in countries where religious opinion is strong and fairly unanimous may be exerted in other ways. In social matters also, there has practically ceased to be legal coercion of opinion.[2] The argument for the suppression of individual opinion has been tersely summarized by the author above quoted:

[1] Bury: *History of Freedom of Thought*, p. 9.

[2] Except in the recent period of excitement and stress during the Great War, when suppression of opinion was, for better or for worse, taken as a measure of national defense.

Those who have the responsibility of governing a society can argue that it is incumbent on them to prohibit the circulation of pernicious opinions as to prohibit any anti-social actions. They can argue that a man may do far more harm by propagating anti-social doctrines than by stealing his neighbor's horse or making love to his neighbor's wife. They are responsible for the welfare of the State, and if they are convinced that an opinion is dangerous . . . it is their duty to protect society against it as against any other danger.[1]

The social importance of individuality in opinion. There have been many notable documents in support of the belief that society is the gainer and not the loser by permitting and encouraging individuality in thought and belief. The following, taken from one of the most famous of these, John Stuart Mill's *Essay on Liberty*, was written to illustrate the fatal results of prohibiting dissenting opinions merely because most people think or call them immoral:

Mankind can hardly be too often reminded that there was once a man named Socrates, between whom and the legal authorities and public opinion of his time there took place a memorable collision. Born in an age and country abounding in individual greatness, this man has been handed down to us by those who best knew both him and the age, as the most virtuous man in it. . . . This acknowledged master of all the eminent thinkers who have since lived — whose fame, still growing after two thousand years, all but outweighs the whole remainder of the names which make his native city illustrious — was put to death by his countrymen, after a judicial conviction, for impiety and immorality. Impiety, in denying the gods recognized by the State. . . . Immorality, in being, by his doctrines and instructions, a "corrupter of youth." Of these charges the tribunal, there is every ground for believing, honestly found him guilty, and condemned the man who probably of all then born had deserved best of mankind to be put to death as a criminal.[2]

Every important step in human progress has been a variation from the normal or accustomed, something new. Most advances in science have been departures from older and accustomed ways of thinking. Through the permission and encouragement of individual variation in opinion we may

[1] Bury: *loc. cit.*, p. 13.

[2] J. S. Mill: *Essay on Liberty*, chap. II.

discover in the first place that accepted beliefs are wrong. Galileo thought differently from the accepted Ptolemaic astronomy of his day, and the demonstration of his diverging belief proved the Ptolemaic astronomy to be wrong. The evolutionary theory, bitterly attacked in its day, replaced Cuvier's doctrine of the forms of life upon earth coming about through a series of successive catastrophes. Lyell, in the face of the whole scientific world of his day, insisted on the gradual and uniform development of the earth's surface. Half the scientific doctrines now accepted as axiomatic were bitterly denounced when they were first suggested by an inquiring minority.

Milton in his famous *Areopagitica*, an address to Parliament written in 1644, protesting against the censorship of printing, stressed the importance of permitting liberty for the securing and developing of new ideas:

> What should ye do then, should ye suppress all this flowery crop of knowledge and new light sprung up and yet springing daily in this city? Should ye set an oligarchy of twenty engrossers [censors] over it, to bring a famine upon our minds again, when we shall know nothing but what is measured us by their bushel? . . . That our hearts are now more capacious, our thoughts more erected to the search and expectation of greatest and exactest things, is the issue of your own virtue propagated in us; ye cannot suppress that unless ye reënforce an abrogated and merciless law. . . . Give me the liberty to know, to utter, and to argue freely according to conscience, above all liberties. [1]

Even if the currently accepted doctrines prove to be true, there is, as Mill pointed out, a vast social utility in permitting the expression of contrary opinion though it be an error. New ideas, however extreme, "may and commonly do possess some portion of truth"; they bring to light and emphasize some aspect or point of view which prevailing theories fail to note. Thus the possible over-emphasis of certain contemporary writers on the socialization of man's life is a valuable corrective to the equal over-emphasis on individualism which was current among so many thinkers during the nineteenth

[1] Milton: *Areopagitica.*

century. The insistence with which present-day psychologists call our attention to the power of instinct, though it may possibly be over-emphasized, counterbalances that tendency exhibited by such earlier authors as Bentham to picture man as a purely rational being, whose every action was determined by sheer logic.

Finally, unless doctrines are subjected to criticism and inquiry, no matter how beneficial they are to society, they will become merely futile and empty formulæ with very little beyond a mechanical influence on people's lives. The maxims of conventional morality and religion which everybody believes and few practice are solemnly bandied about with little comprehension of their meaning and no tendency to act upon them. A belief becomes, as Mill pointed out, living, vital, and influential in the clash of controversy. Whether novel and dissenting doctrines are true or false, therefore, the encouragement of their expression provides vitality and variation without which progress is not possible.

The social appreciation of persons who display marked individual opinions varies in different ages toward the same individual. The martyr stoned to death by one generation becomes the hero and prophet of the next. One has but to look back at the contemporary vilification and ridicule to which Lincoln was subjected to find an illustration. Or, on a more monumental scale:

> The event which took place on Calvary rather more than eighteen hundred years ago. The man who left on the memory of those who witnessed his life and conversation such an impression of his moral grandeur that eighteen subsequent centuries have done homage to him as the Almighty in person, was ignominiously put to death, as what? As a blasphemer.[1]

One would suppose that men would have learned not only to tolerate and be receptive to novelty in belief after these repeatedly tardy recognitions of greatness. There are dozens of instances in the history of religious, social, and political

[1] Mill: *Essay on Liberty*, chap. II.

belief, of men and women who, suppressed with the bitterest cruelty in one generation, have been in effect, and sometimes in fact, canonized by posterity. And a certain degree of tolerance and receptiveness has come to be the result. But while we no longer burn religious and social heretics, condemnation is still meted out in some form of ostracism: Prejudice, custom, and special interest frequently move men to suppress in milder ways extremists, expression of whose opinions seems to them, as unusual opinions have frequently seemed, fraught only with the greatest of harm.

CHAPTER VIII

THE DEVELOPMENT OF THE "SELF"

Origin and development of a sense of personal selfhood. The expression of individuality in opinion is only one way men have of expressing their personality, individuality, or self. From the beginnings of childhood, men experience an increasing sense of "personal selfhood" which finds various outlets in action or thought. So familiar, indeed, in the normal man is his realization that he is a "self," that it seldom occurs to him that this conception was an attainment gradually accomplished through long years of experience with the world about him. The very young baby does not distinguish between Itself and the Not-Self which constitutes the remainder of the universe. It is nothing but a stream of experiences, of moment to moment pulsations of desire, of hunger and satisfaction, of bodily comfort and bodily pain. As it grows older, it begins dimly to distinguish between Itself and Everything-Else; it finds itself to be something different, more vivid, more personal and interesting than the chairs and tables, the crib and bottle, the faces and hands, the smiles and rattles that are its familiar setting. It discovers that "I am I," and that everything else ministers to or frustrates or remains indifferent to its desires. It becomes a person rather than a bundle of reactions. It develops a consciousness of "self."

In its simplest form this consciousness of self is nothing more than a continuous stream of inner organic sensations, and the constant process of the body and limbs "and the special interest of these as the seat of various pleasures and pains." This is what James calls the "bodily self." As it grows older, the baby distinguishes between persons and things. And as, in setting off his own body from other things,

it discovers its "bodily self," so in setting off its own opinions, actions, and thoughts from other people, it discovers its "social self." It is because Nature does in some degree the "giftie gie us to see ourselves as others see us," that we do discover our "selves" at all. "The normal human being, if it were possible for him to grow up from birth onward in a purely physical environment, deprived, that is, to say, of both animal and human companionship, would develop but a very crude and rudimentary idea of the self." [1]

The social self. A man's social self, that is, his consciousness of himself as set over against all the other individuals with whom he comes in contact, develops as his relations with other people grow more complex and various. A man's self, apart from his mere physical body, consists in his peculiar organization of instincts and habits. In common language this constitutes his personality or character. We can infer from it what he will, as we say, characteristically do in any given situation. And a particular organization of instincts and habits is dependent very largely on the individual's social experience, on the types and varieties of contact with other people that he has established. There will be differences, it goes without saying, that depend on initial differences in native capacity. But both the consciousness of self and the overt organization of instinctive and habitual actions are dependent primarily on the groups with which an individual comes in contact. In the formation of habits, both of action and thought, the individual is affected, as we have seen, largely by praise and blame. He very early comes to detect signs of approval and disapproval, and both his consciousness of his individuality and the character of that individuality are, in the case of most persons, largely determined by these outward signs of the praise and blame of others. And since, in normal experience, a man comes into contact with several distinct groups, with varying codes of conduct, he will really have a number of distinct personalities. The professor is a

[1] McDougall: *loc. cit.*, p. 183.

different man in his class and at his club; the judge displays a different character in the court and in the bosom of his family.

The self that comes to be most characteristic and distinctive of a man, however, is determined by the group with which he comes most habitually in contact, or to whose approvals he has become most sensitive. Thus there develop certain typical personalities or characters, such as those of the typical lawyer or soldier or judge. Their bearing, action, and consciousness of self are determined by the approvals and disapprovals of the group to which they are most completely and intimately exposed.

Both the consciousness of self which most men experience and the overt expression of that selfhood in act are thus seen to be a more or less direct reflex of the praise and blame of the groups with which they are in contact. Men learn from experience with the praise and blame of others to "place" themselves socially, to discover in the mirror of other men's opinions the status and locus of their own lives. As we shall see in a succeeding section, the degree of satisfaction which men experience in their consciousness of themselves is dependent intimately on the praise and blame by which their selfhood is, in the first place, largely determined. In the chapter on the "Social Nature of Man," we examined in some detail the way in which praise and blame modified a man's habits. The total result of this process is to give a man a certain fixed set of overt habits that constitute his character and a more or less fixed consciousness of that character.

On the other hand, a man's character and self-consciousness may develop more or less independently of the immediate forces of the public opinion to which he is exposed. One comes in contact in the course of his experience not merely with his immediate contemporaries, but with a wide variety of moral traditions. Except in the rigidly custom-bound life of primitive societies, a man is, even in practical life, exposed to a diversity of codes, standards, and expectations of behavior. His family, his professional, his political, and his social

groups expose him to various kinds of emphases and accents in behavior. And a man of some intelligence, education, and culture may be determined in his action by standards whose origin is remote in time, space, and intention from those operative in the predominant public opinion of his day. He may come to act habitually on the basis of ideal standards which he has himself set up through reflection, or which he has acquired from some moral system or tradition, far in advance of those which are the staple determinants of character for most of his contemporaries. He may be one of those rare moral geniuses, singularly unsusceptible to praise and blame, who create a new ideal of character by the dominant individuality of their own. Or, as more frequently happens, he may follow the ideals set up by such a one, instead of accepting the orthodoxies which are generally observed. He may follow Christ instead of the Pharisees, Socrates instead of the habit-crusted citizens of Athens. We are, indeed, inclined to think of a man as a peculiarly distinctive personality, when his sense of selfhood, and the overt actions in which that selfhood finds expression, are not determined by the current dogmas of his day, but by ideal standards to which he has reflectively given allegiance. But so much is the self, both in its consciousness and expression, socially produced that men acting on purely imagined ideal standards, current nowhere in their day and generation, have imagined a group, no matter how small or how remote, who would praise them or a God who noted and approved their ways.

Character and will. From the foregoing it would appear that the self is an organization of habitual tendencies, developed primarily through contact with other people and more specifically through their praise and blame. And consciousness of self is the awareness of the unique or specific character of the habit-organization one has acquired. Individuals differ natively in given capacities, and differences in fully developed personalities depend, certainly in part, on innate initial differences. But differences in the kinds of selfhood

displayed and experienced by different men are due to something more than differences in native capacities and native desires. The self that a man exhibits and of which he is conscious, at any given period of his life, depends on the complex system of habits he has in the course of his experience developed. One individual may, as we have seen, develop a number of sets of organized dispositions, a multiple character, as it were, as a consequence of the multiplicity of groups with which he has come in contact. But whether through deliberate or habitual conformity to one group as a norm, or the deliberate organization of habits of action and feeling and thought, on the basis of ideal or reflective standards, a man comes to develop a more or less "permanent self." That is, while men start with somewhat similar native equipments, each man's set of inborn tendencies comes to be fixed in a fairly definite and specific system. While all men start within limits equally responsive and similarly responsive to all stimuli, certain stimuli come to have the "right of way." They are more or less easily and more or less readily responded to, according as they do or as they do not fit in with the habit-organization which the individual has previously acquired.

When we say that a man has no character or individuality, we mean that he has developed no stable organization of actions, feelings, and thoughts, with reference to which and by the predominant drive of which his actions are determined. There is no particular system of behavior which he has come consciously to identify as his person or self; no interweaving of motives and stimuli by the persistent momentum of which his conduct is controlled; no single group of stimuli rather than another has, in his pulpy person, attained priority in stimulating power. Such men are chameleons rather than characters. Their actions do not flow from a selfhood or individuality at all; they are merely the random results of the accidental situations in which such men find themselves.

The self exists, then, as a well-defined, systematic trend of behavior. Impulses to action attain a certain order of prior-

ity in an individual's conduct, and it is by the momentum of these primary drives to action that his life is controlled. What is commonly known as "will" is simply another name for the power and momentum of a man's "personal self." Will exists not as a thing, but as a process. To will an action means to identify it consciously with one's permanent self, to weigh and support it with all the emotions and energies connected with one's consciously realized habitual system of behavior. A man may bring to bear on the accomplishment of a given action the deepest and most powerful motive forces of his developed personality. To pass a course or make a team a student may marshal all the habits of loyalty, of self-assertion (and the emotional energies associated with them) which have become the leading ingredients of his character.

The "permanent self" becomes involved in the same way in the case of willing *not* to perform a certain action. Any stimulus may, on occasion, be strong even if it has ceased to be characteristic or habitual in a man's behavior. This is particularly the case with some of the primary physical drives to action. Even the ascetic feels the strong sting of sense-desire. A man in resisting temptation, in denying the pressure of an immediate stimulus, is setting up to block or inhibit it all the contrary reactions and emotions which have become part of the "permanent self." In more familiar language he is setting will over against desire. The temporary desire may be strong, but it is consciously regarded by the individual as alien to his "real" or "better" self. And *will* is this whole complex organization of the permanent self set over against an alien intruding impulse.

The phenomenon of will contending against desire occurs usually when a stimulus not characteristically powerful in a man's conduct becomes so through special conditions of excitement or fatigue. When a man is tired, or stirred by violent emotion, his systematic organization of habits begins to break down. The ideal permanent or inclusive self is then brought into conflict with a temporary passion. Love con-

flicts with duty, the lower with the higher self, flesh with spirit, desire with will. Few men have so thoroughly integrated a self that such conflicts altogether cease. Every one carries about with him a more or less divided soul.

> Fire and ice within me fight
> Beneath the suffocating night.

There are, in the records of abnormal psychology, many cases of really divided personalities, cases of two or more completely separate habit-organizations inhabiting the same physical body. Such a complete Dr.-Jekyll-and-Mr.-Hyde dissociation of a personality is clearly abnormal. But it is almost as rare to find a completely integrated character. We are all of us more or less multiple personalities. Our various personalities usually keep their place and do not interfere with each other. Our professional and family selves may be different; they do not always collide. But the various characters that we are in various situations not infrequently do clash. The self whose keynote is ambition or learning may conflict with the self whose focus is love.

> "Resolve to be thyself; and know, that he
> Who finds himself, loses his misery!"

wrote Matthew Arnold. And it does seem to be true that a man whose will is never divided or confused by contending currents of desire, whose character is unified and whose action is consistent, is saved from the perturbations, the confusions, the tossings of spirit which possess less organized souls. But to find one's self, and to keep one's self whole and undivided, is a difficult achievement and a rare one. Even men whose interests and activities are fairly well defined find their characters divided and their wills, consequently, confused. A man's duties as a husband and father may conflict with his professional ambitions; his love of adventure, with his desire for wealth and social position; his artistic interests, with his philanthropic activities; his business principles, with his religious scruples. A man can achieve a selfhood by thrusting

out all interests save one, and achieving thereby unity at the expense of breadth. There are men who choose to be, and succeed in being, first and last, scholars or poets or musicians or doctors. All activities, interests, and ideals that do not contribute to that particular and exclusive self are practically negligible in their conduct. Such men, although they have attained a permanent self, have not achieved a broad, comprehensive, or inclusive one. They are like instruments which can sound only one note, however clear that may be; or like singers with only a single song. All lives are necessarily finite and exclusive; every choice of an interest or ideal very possibly precludes some other. A man cannot be all things at once; "the philosopher and the lady-killer," as James merrily remarks, "could not very well keep house in the same tenement of clay." But a strong character need not necessarily mean a narrow one, nor need a determined will be the will of a fanatic. The self may be — in the case of rare geniuses it has been — diverse in its interests, activities, and sympathies, yet unified and consistent in action. A character may be various without being confused; versatility is not synonymous with chaos. A man's interests and activities may be given a certain order, rank, and proportion, so that his life may exhibit at once the color, consistency, clarity, and variety of a finished symphony.

The consciousness of "self" which starts as a mere continuum of bodily sensations comes to be the net result of one's social and intellectual as well as physical activities. The "self" of which we are conscious ceases to be our merely physical person, and comes to include our possessions. The house we live in and the garden we tend, our children, our friends, our opinions, creations, or inventions, these become extensions and more or less inalienable parts of our personalities. Our "selfhood" includes not simply us, but ours.

Our possessions, and especially such as are the fruits of our own actions, are indications of what we are. We judge, and within limits correctly, of a man by the company he keeps,

the clothes he wears, by the books he reads, the pictures with which he decorates his home, the kind of home he builds or has built. And a man may feel as provoked by insult or injury to the person or things which have become an intimate part of his life as if he were being attacked in his physical person. Strip a man one by one of his physical acquisitions, of his associates, of the indications and mementos of the things he has thought and done, and there would be no "self" left. To speak of a man as a nonentity is to imply that he is no "self" worth speaking of; that he can be blown about hither and thither; that neither his opinions nor desires, nor possessions, nor associates make an iota of difference in the world. A man who is a "somebody," a "person to be reckoned with," is one who is a "self." He is one whose physical possessions or personal abilities or standing in the community make him one of the "powers that be." And it is the desire to be a factor in the world, to increase the scope and consequence of one's self that is the leading ingredient in what we call ambition, and the desire for fame, and at least one ingredient in the desire for wealth. Men may want wealth merely for the sake of possession, or for bodily comfort, but part of the desire consists in the ability thereby to spread one's influence, to be "one of the happy sons of earth, who lord it over land and sea, in the full-blown lustihood that wealth and power can give, and before whom, stiffen ourselves as we will . . . we cannot escape an emotion, sneaking or open, of dread." [1]

The enhancement of the self. The building-up of a more or less permanent self is natively satisfactory to most men, and every means will be taken to increase its scope and influence. Biologically we are so constituted as to perform many acts making for our self-preservation. The ordinary reflexes and instincts such as those which prompt us to eat, to defend ourselves against blows and the threatening approach of animals, to keep our equilibrium and recover our balance, are examples of these.

[1] James: *Psychology*, vol. 1, p. 293.

The development and preservation of our social self is also made possible as it is initially prompted by our specifically social instincts. There is a native tendency, as already noted, to get ourselves noticed by other people, to seek their praise and avoid their blame. The instincts of self-display and leadership, and many of the non-social instincts, such as curiosity and acquisitiveness, are frequently called into play in the service of the more directly social tendencies of the individual. A large part of our activity, whatever be its other motives, is determined to some degree by the desire to develop the social self, to be a "somebody," to cut a figure in the world.

In the enlargement of the social self, various people use various means, and with varying degrees of vigor, intensity, and persistency. There are a few who go through life with almost no sense of selfhood, who go through their daily routine with no more recognition of their acts as their own than that displayed by an animal or a machine. In most men the sense of their personality and their interest in it are high, and the development of the self is sought in all possible or legitimate ways. The ways in which the self is developed, and the kind of self that is sought, help to determine whether a man is self-seeking in the lowest sense of that epithet, or idealistic and ambitious in the approved popular sense.

The kind of self we seek to build up depends, as we have seen, largely on the type of praise and blame and the general character of the moral tradition to which we have been exposed. But whichever type of self a man does select as his ideal or permanent self, all his activities will be more or less consciously and more or less consistently controlled by it. His habits of action, his habitual choices, his habitual feelings, will be built up with this ideal self as a standard and control. He will do those things which "carry on" toward the ideal self, leave undone those things which do not. The man or woman who wishes simply to cut a figure "socially" will cultivate the wit, the gayety, the facility, the smartness, which are

the familiar ingredients of such a personality. The same persons will be singularly blind to abysses of ignorance which would be painfully in the consciousness of those who had set up for themselves ideals of erudition and culture. A laborer will live and move and have his being serenely in clothes and in surroundings that "would never do" for a professional man who had committed himself to live according to the social standards of his class. Sometimes a man's actions will be directed toward the construction of an ideal self, on standards far in advance of those of his group. A man in developing such a self is, indeed, in some cases practically committing social suicide. The extreme dissenter from the current standards of action is attempting to build up what James has well called a "spiritual self," a self in the light of his own ideals, rather than those current among his contemporaries.

Egoism *versus* altruism. The individual in developing his own personality need not, necessarily, be selfish, nor is the enhancement of one's personality incompatible with altruism. One man may find his individuality sufficiently developed in a large bank account, another in discovering a cure for cancer; one man may seek nothing but gratification of his physical appetites; another may find his fulfillment on the battlefield in defense of the national honor. Since man is born with the original tendencies to herd with and have common sympathies with his fellows, and to pity those of them that are weak and distressed, there is nothing more unnatural about altruism than about egoism. It is true that in some men the so-called altruistic impulses, the impulse to sympathize with the emotions, feelings, aspirations and difficulties of others, and to pity them in their distress, are comparatively weak; that in some men the more obviously egoistic impulses, such as the gratification of bodily desires, the acquisition of physical possessions are strong and uncontrollable. But through education the altruistic and social impulses of men may be cultivated and strengthened, so that they may become more

powerful and dominant than even the urgency of physical desire. "Man cannot live by bread alone," and a man in whom a passion for reform or for religion, for a cause or for a conquest has become strong, will sacrifice food, sleep, and physical comfort, and may even find the satisfactory fulfillment of self in self-sacrifice and obliteration.[1]

The old distinction between egoism and altruism is thus an artificial one. A genuinely altruistic individual derives satisfaction from the beneficent things he does, though he does not, as Jeremy Bentham supposed, calculate the benefits he will derive from his beneficence. Altruism is just as natural as egoism in its origins, though the impulses of self-preservation and personal physical satisfaction are natively stronger and more numerous. But human beings can be educated to altruism, and find the same satisfaction in service to others as individuals reared in less humane conditions find in satisfying their immediate physical desires.

Self-satisfaction and dissatisfaction. Since the development of selfhood plays so large a part in human action, it is natural that powerful emotions should be associated with it. Individuals become conscious of the kind of self they are and measure it favorably or unfavorably with the kind of self they would be. In so far as the actuality they conceive themselves to be measures up to the ideal self, to the fulfillment of which they have dedicated themselves, they have a feeling of self-satisfaction, of elation. They are jubilant or crestfallen, satisfied or dissatisfied with themselves, in so far as they are in their own estimation making good. In normal individuals, these estimates of triumph and frustration are, of course, colored and qualified by signs of approval and disapproval from other people. There are very few — and these insanely conceited — in whom the opinions of others are not largely influential in determining their own estimates of themselves.

[1] This is partly because man's sense of selfhood is so largely socially conditioned and affected by praise and blame. Many a man in whom impulses of an egoistic sort are strong cannot resist the scorn of his gang, club, or clique. In this sense even socially beneficial actions may be "selfish."

The emotions themselves of self-satisfaction and abasement are of a unique sort . . . each has its own peculiar physiognomical expression. In self-satisfaction the extensor muscles are innervated, the eye is strong and glorious, the gait rolling and elastic, the nostril dilated, and a peculiar smile plays upon the lips. This complex of symptoms is seen in an exquisite way in lunatic asylums, which always contain some patients who are literally mad with conceit, and whose fatuous expression and absurdly strutting or swaggering gait is in tragic contrast with their lack of any valuable personal quality. It is in these same castles of despair that we find the strongest examples of the opposite physiognomy, in good people who think they have committed "the unpardonable sin" and are lost forever, who crouch and cringe and slink from notice, and are unable to speak aloud or look us in the eye. . . . We ourselves know how the barometer of our self-esteem and confidence rises and falls from one day to another through causes that seem to be visceral and organic rather than rational, and which certainly answer to no corresponding variations in the esteem in which we are held by our friends.[1]

Self-satisfaction depends, as has been said, on the kind of self we are aiming at, and that in turn depends on the kind of self we are. A professional bank-robber may take a craftsman's pride in the skill with which he has rifled a safe and made off with the booty, just as a surgeon may take pride in a delicate operation, or a dramatist in a play. The ideal and the measure of satisfaction will again be determined by the group among whom we move. The bank-robber will not boast of his exploits to a missionary conference; the surgeon will prefer to explain the details of his achievement to medical men who can critically appreciate its technique. The ideal self we set ourselves may far outreach our achievements, considerable and generally applauded though these be. A man may know in his heart how futile are his triumphs, how far from the goals he cherished as young ideals. Many a brilliant comedian longs to play Hamlet; the gifted and scholarly musician knows how easy it is to win an audience with sentimental and specious music. The humility of genius has

[1] James: *loc. cit.*, vol. I, p. 307.

again and again been noted. "The more one knows the less one knows one knows."

Many men attain self-satisfaction through negation, through a serene surrender of the unattainable. As the Epicureans counseled, they increase their happiness by lessening their desires. The content which middle-aged people exhibit is not so frequently to be traced to the dazzling character of their achievement as to their resignation to their station. Young people are moody and unhappy not infrequently because they cannot make a reconciliation between what they would be and what they are. Others again attain satisfaction vicariously in the achievements of others, as mediocre fathers do in their brilliant children, or as sympathetic and interested people do in the whole world about them.

> The magnanimity of these expansive natures is often touching indeed. Such persons can feel a sort of delicate rapture in thinking that, however sick, ill-favored, mean-conditioned, and generally forsaken they may be, they are yet integral parts of the whole of this brave world, have a fellow's share in the strength of the dairy horses, the happiness of the young people, the wisdom of the wise ones, and are not altogether without part or lot in the good fortunes of the Vanderbilts and the Hohenzollerns themselves.[1]

In some men a modicum of success will give a disproportionate sense of confidence and power. The man to whom success has always come easily is not baffled by problems that would appall those who, in middle life, "lie among the failures at the foot of the hill." As Goethe, who had always been miraculously successful, said to one who came to complain to him about the difficulty of an undertaking: "You have but to blow on your hands." In a crowd one can hardly fail to note the easy air of competence and confidence that distinguishes the successful man of affairs.

The contrast between the self and others. The consciousness of self increases with the expression of personal opinion and power. The man whose books are translated into half a

[1] James: *loc. cit.*, vol. I, p. 313 (written in 1890).

dozen languages, to whose lectures people come from all parts of the world, cannot help feeling an increased sense of importance, although he may combine this consciousness with a sense of personal humility. In the same way a man who exerts great social power, who controls the economic lives of thousands of employees, or whose benefactions in the way of libraries and charitable institutions dot the land, develops inevitably a sense of his own selfhood as over against that of the group. He begins to realize that he does make a significant difference in the world. This was curiously illustrated in a speech delivered by Andrew Carnegie when, after a prolonged absence in Europe, he came back to the opening of the Carnegie Institute, the building of which had cost him six million dollars:

> He said he could not bring himself to a realization of what had been done. He felt like Aladdin when he saw this building and was aware that he had put it up, but he could not bring himself to consciousness of having done it any more than if he had produced the same effect by rubbing a lamp. He could not feel the ownership of what he had given, and he could not feel that he had given it away.[1]

This sense of incredulity at one's actions or achievements is rarer than the consciousness of self which it promotes. The intensity of this self-awareness is increased when opinion is expressed or power exerted in the face of opposition. The man who finds himself standing out against the community in which he lives, who is a freethinker among those who are intensely religious, an extremist among those who are custom-ridden, spiritualistic among people who are controlled by materialistic ideas, finds the sense of his own personality heightened by contrast. When dissenting opinions are steadfastly maintained in the face of the opposition of a powerful majority, there develops a personality with edge and strength. The man who can persist in his belief against the prevailing winds of doctrine and of action may be wrong, but he is a

[1] Quoted from the obituary of Andrew Carnegie in the *New York Times* of August 12, 1919.

personality. He is intensely and persistently aware of himself. Similarly, the exertion of power in the face of opposition increases the sense of one's own power and helps to consolidate it. One derives from it the same exhilaration that one has in feeling a canoe under the impulsion of one's paddle overcome the resistance of the water. In the same way, the exertion of social power in the face of obstacles makes half the exhilaration of politics and business for some types of men in business and political life. One admires the ruthlessness of a Napoleon at war or of a captain of industry in the sharp industrial competition of the nineteenth century, not because it is ruthless, but because it is power. Such men are at least not neutral; they are positive forces.

The contrast between the "self" and the others may be friendly, with a recognition of all other selves as equally entitled to existence. One pursues the even tenor of one's way, and is content to let others pursue theirs. Men of very powerful personality have exhibited the utmost gentleness and consideration of others. Lincoln, the typical strong, silent man, displayed a tenderness for the suffering and distressed that has already become proverbial.

The contrast between one's self and the world may be one of bitter opposition, as when one's ideas or actions are subjected to social censure. As Mill argued over half a century ago, the forceful suppression of opinion produces a more violent manifestation of it. Socrates was put to death, but the Socratic philosophy rose like the sun in the heavens. A sense of injustice, of unfairness, will not only intensify a man's opinions but his consciousness of his own personality. To meet with opposition is to feel acutely the outlines of one's own person; to be forced to recognize the differences between ourselves and others is to discover what sort of people we ourselves are.

The contrast is likewise one of opposition, sometimes to bitterness, when the individual seeks to impose his own opinions or his own personality forcibly on others. A Mohammed, fired with the zeal of a religious enthusiasm, may

spread his doctrine by fire and sword and be resisted by similar violence. Others than the Germans have betaken themselves to arms to spread a specific and arbitrary type of life. On a small scale it is seen wherever a fanatical parent tries to force his own belief and type of life upon his children, reared in a younger and freer generation. In contemporary society most individuals are neither tempted nor permitted to coerce people to their own way of thinking, although economic pressure and social ostracism are still powerful instruments by which strategically situated individuals can force their own opinions or types of life upon others.

Types of self. The consciousness of self varies in its expression and intensity and at different times may display different types or combinations of types. No one is ever utterly consistent, and different situations, different groups, provoke different selves in us. Nobody writes quite the same kind of letter to his different friends, or is, as has been pointed out, the same person in different situations. But, except for those intellectual will-o'-the-wisps, or moral ne'er-do-wells who take on the color of every new circumstance in which they happen to be cast, men do develop predominantly one type of self which constitutes, in familiar language, their character.

The manner of our consciousness of our personality may vary in quality, even though it be intense in degree. One may be aware even of one's importance, without being "self-important." One may be quite conscious of one's significance in the world and yet not be "self-conscious." It is indeed usually the little man who has a great air about him. The officiousness and pettiness of the small soul invested with authority has often been commented on. Proverbial wisdom has succinctly recorded the fact that empty barrels make the most noise. Latterly, Freudian psychology has pointed out the mechanisms by which insignificant people compensate for the poverty of their person by bluster and brag.[1]

[1] On this point see an illuminating brief discussion by Hart in *The Psychology of Insanity.*

Self-display or boldness. The most obvious type of consciousness of self is found in individuals who seek mere social conspicuousness, who spend no inconsiderable part of their energy in deliberate display. The child says with naïve frankness, "See how high I can jump." Many adults find more conspicuous or subtle ways of saying the same thing. One need only to take a ride in a bus or street car to find the certain symptoms of self-display. These may consist in nothing more serious than a peculiarly conspicuous collar or hatband, or particularly high heels. It may consist in a loud voice full of pompous references to great banquets recently attended or great sums recently spent. It may be in a raised eyebrow or a disdainful smile. There are people among every one's acquaintance whose conversation is largely made up of reminiscences of more or less personal glory, of deliberate allusions to large salaries and famous friends, to glorious prospects and past laurels.[1]

On a larger scale this is to be found in the almost universal desire to see one's name in print:

> There is a whole race of beings to-day whose passion is to keep their names in the newspapers, no matter under what heading, "arrivals and departures," "personal paragraphs," "interviews" — gossip, even scandal will suit them if nothing better is to be had. Guiteau, Garfield's assassin, is an example of the extremity to which this craving for notoriety may go in a pathological case. The newspapers bounded his mental horizon; and in the poor wretch's prayer on the scaffold, one of the most heartfelt expressions was: "The newspaper press of this land has a big bill to settle with thee, O Lord!" [2]

As was pointed out in connection with praise and blame, more of our actions than we should care to admit are determined by this desire for recognition. The loud, the vulgar, the notoriety seekers are merely extreme illustrations of a type of self that most of us are some of the time.

[1] Almost every college class has one or two members who enter vociferously and continuously into discussions, less for the contribution of ideas or information than for the propagation of their own personalities.

[2] James: *loc. cit.*, vol. I, p. 308.

Self-sufficient modesty. The other extreme is exhibited by the type of personality that is markedly averse to display and shrinks from observation. In its intensest and possibly least appealing form it is exhibited by people who become awkwardly embarrassed in the presence of a stranger, however fluent and vivacious they may be with their friends. This type at its best may be described by the epithet of self-sufficient modesty. To be such a person may be said to be an achievement rather than a weakness. To be self-sufficient and modest at the same time means that one is going about one's business, that one is too absorbed in one's work to be continually and anxiously noting what sort of figure one cuts in the world. To quote Matthew Arnold's well-known lines:

> "Unaffrighted by the silence round them,
> Undistracted by the sights they see,
> These demand not that the things without them
> Yield them love, amusement, sympathy." [1]

There are in every great university quiet great men who steadily pursue vital and difficult researches without the slightest reference or desire for cheap conspicuousness. In every profession and business there are known to the discriminating men who are experts, even geniuses in their own field, but who shrink back from the loudness of publicity as from a plague. There are a number of wealthy philanthropists in all our large cities who consistently and steadily do good works in almost complete anonymity. One finds in almost every department of human activity these types of self-effacing men who find their fulfillment in the work they do rather than in moving in the aura of other people's admiration.

The positive and flexible self. But in order to be effective in affairs, some positive force must be displayed, and modesty need not mean pusillanimity. A frequently observable type of personality — and socially one of a highly desirable sort — is the type of man who, himself standing for positive convictions, ideas, and principles of action, and not casually

[1] *Self-Dependence.*

to be deflected from them, has sufficient flexibility and sensitivity to the feelings of others, to accept modification. Such a self not only has its initial force and momentum, but gains as it goes by the experience of others. A personality must be positive to contribute to the solution of difficulties and the management of enterprises, but it must be receptive in order to benefit by the ideas of others and coöperate with them. To have power and humility at once is sometimes sufficient to make a leader among men. Humility prevents us from rushing headlong along the paths of our own dogmatic errors; it enables us further to deal with other people who would be simply antagonized by our flat-footed insistence on every detail of our own initial position. The history of great statesmanship is in part, at least, the history of wise compromise. Nor does this mean sordid temporizing and opportunism. As John Morley puts it:

> It is the worst of political blunders to insist on carrying an ideal set of principles into execution, where others have rights of dissent, and those others persons whose assent is as indispensable to success as it is difficult to attain. But to be afraid or ashamed of holding such an ideal set of principles in one's mind in their highest and most abstract expression, does more than any other one cause to stunt or petrify those elements of character to which life should owe most of its savor.[1]

Dogmatism and self-assertion. Too often, however, a person of powerful and distinctive opinions is so moved by the momentum of his own strong enthusiasms, so fixed by the habitual definiteness of his own position that he cannot be swayed. In its worst form this is rampant egoism and dogmatism. All of us have met the loud-mouthed exponent of his own opinions, who speaks whatever be the subject, as if *his* position only were plausible or possible, and as if all who gainsaid him were either fools or knaves.

> If we examine the mental furniture of the average man we shall find it made up of a vast number of judgments of a very precise kind

[1] Morley: *On Compromise*, p. 123.

upon subjects of very great variety, complexity, and difficulty. He will have fairly settled views upon the origin and nature of the universe, and upon what he will probably call its meaning; he will have conclusions as to what is to happen to him at death and after, as to what is and what should be the basis of conduct. He will know how the country should be governed, and why it is going to the dogs, why this piece of legislation is good and that bad. He will have strong views upon military and naval strategy, the principles of taxation, the use of alcohol and vaccination, the treatment of influenza, the prevention of hydrophobia, upon municipal trading, the teaching of Greek, upon what is permissible in art, satisfactory in literature, and hopeful in science.

The bulk of such opinions must necessarily be without rational basis, since many of them are concerned with problems admitted by the expert to be still unsolved, while as to the rest it is clear that the training and experience of no average man can qualify him to have any opinion on them at all.[1]

In action as well as opinion dogmatism and unbridled self-assertion may be the dominant characteristics of a personality. The man who has a strong will and little social sympathy will be ruthlessly insistent on the attainment of his own ends. This type of self has indeed been set up as an ideal by such philosophers as Nietzsche and Max Stirner, who urged that the really great man should express his own personality irrespective of the weaklings whom he might crush in his comet-like career. Thus writes Nietzsche in one of his characteristic passages:

The *Superman* I have at heart; *that* is the first and only thing to me — and *not* man: not the neighbor, not the poorest, not the sorriest, not the best.

In that ye have despised, ye higher men, that maketh me hope. . . . In that ye have despaired, there is much to honor. For ye have not learned to submit yourselves, ye have not learned petty policy.

For to-day have the petty people become master; they all preach submission, and humility, and policy, and diligence, and consideration, and the long *et cetera* of petty virtues.

These masters of to-day — surpass them, O my brethren — these petty people: *they* are the Superman's greatest danger! [2]

[1] Trotter: *Instincts of the Herd*, p. 36.

[2] *Thus Spake Zarathustra* (Macmillan edition), pp. 351–52.

It need scarcely be noted that even if the genius or Superman were justified, as this philosophy insists, on ruthlessly asserting his priority, it is a dangerous procedure to identify one's ambitions with one's desserts. As already noted, a flamboyant assurance of one's own importance is sometimes a ludicrous symptom of the reverse.

The more legitimate manifestation of strong individualism in action or opinion is in the case of deeply conscientious natures, who will not compromise by a hair's breadth from what they conceive to be the right. The fanatic is seldom an appealing character, but he is a type that enforces admiration. Of such unflinching insistence are martyrs and great leaders made. There are in every community men who will regard it as treachery to their highest ideals to compromise at all from the inviolable principles to which they feel themselves committed. Such men are difficult to deal with in human situations involving coöperation and compromise, and they exhibit frequently a rigid austerity, bitterness, and hate that do not readily win sympathy. But it is to such men as these that many religious and social reforms owe their initiation. Bertrand Russell, who, whether one agrees with him or not, exhibits a puritanical devotion to his social beliefs, has finely described the type:

> The impatient idealist — and without some impatience a man will hardly prove effective — is almost sure to be led into hatred by the oppositions and disappointments which he encounters in his endeavors to bring happiness to the world. The more certain he is of the purity of his motives and the truth of his gospel, the more indignant will he become when his teaching is rejected. . . . The intense faith which enables him to withstand persecution for the sake of his beliefs makes him consider these beliefs so luminously obvious that any thinking man who rejects them must be dishonest and must be actuated by some sinister motive of treachery to the cause.[1]

Enthusiasm. The enthusiast is another type of self that plays an important part in social life and makes not the least

[1] Russell: *Proposed Roads to Freedom*, pp. xiii–xiv.

attractive of its figures. The exuberant exponent of ideas, causes, persons, or institutions is an effective preacher, teacher, or leader of men, and may be, apart from his utility, intrinsically of the utmost charm. Emotions vividly displayed are, as already pointed out in connection with sympathy, readily duplicated in others, and the ardors of the enthusiast are, when they have the earmarks of sincerity, contagious. A genuinely enthusiastic personality kindles his own fire in the hearts of others, and makes them appreciate as no mere formal analysis could, the vital and moving aspects of things. Good teaching has been defined as communication by contagion, and the teachers whom students usually testify to have influenced them most are not those who doled out flat prescribed wisdom, but those whose own informed ardor for their subject-matter communicated to the student a warm sense of its significance. Leaders of great movements who have been successful in controlling the energies and loyalties of millions of men have been frequently men of this high and contagious voltage. It certainly constituted part of Theodore Roosevelt's political strength, and, in more or less genuine form, is the asset of every successful political speaker and leader.

Both for the one controlled by enthusiasm and for the others to whom it spreads, experience becomes richer in significance. Poets and the poetically-minded have to a singular degree the power of clothing with imaginative enthusiasm all the items of their experience.

Enthusiasm does not necessarily connote hysteria or sentimentalism. The unstable enthusiast is a familiar type, the man who has another object of eagerness and loyalty each week. Mark Twain describes the type in the person of his brother, who had a dozen different ambitions a year. But enthusiasm may be a long-sustained devotion to a single ideal. A curious instance of it was seen in the case of an Armenian scholar who, so it is reported to the writer by a student of Armenian culture, spent forty years in mastering cuneiform

script in order to prove that the Phrygians were descended from the Armenians, and not *vice versa*.

Shelley could kindle the spirit of revolution in thousands who would have been bored to death with the same fiery doctrines in the abstract and cold pages of Godwin, from whom Shelley derived his ideas of "political justice." The enthusiast, since he instinctively likes to share his emotions, not infrequently displays an intense desire for leadership, not so much that he may be a leader as that he may win converts to his own cause or creed. Such a personality finds its satisfaction in some form of proselyting zeal, be it for a religion, for a favorite charity, for good books, poetry, or social justice. A well-known literary scholar who died recently was thus described by one of his former students:

> Dr. Gummere was not a teacher; he was a vital atmosphere and his lectures, as one considered them from an intellectual or emotional angle, were revelations or adventures. There never were such classes as his, we believed. Who could equal him in readiness of wit? Where was there such a raconteur? Who else could put the feel of a poem into one's heart? . . . His voice was very deep, and exceedingly free and flexible. It always seemed to brim up as from a spirit overflowing. Everything about him was individual and spontaneous. He was perhaps most like a powerful river that braced one's energies, and carried one along without the slightest desire to resist.[1]

The negative self. All the types of personality or self that have thus far been discussed are in some way positive or assertive. But the self may be exhibited negatively, in a shrinking, not only from observation, but from any positive or pronounced action. This has already been noted in connection with submissiveness. Most people in the presence of their intellectual and social or even their physical superior, experience a sense of, to use McDougall's term, "negative self-feeling." In some people this negation or effacement of the self is a predominant characteristic.

It may be mere social timidity, which, in the case of those

[1] Charles Wharton Stork: "A Great Teacher," *The Nation*, July 26, 1919.

continually placed in servile positions, as in the case of the proverbial "poor relation," may become chronic. In its most disagreeable form it is exhibited as an obsequious flattering and a pretentious humility. Of this the classic instance is Uriah Heep in *David Copperfield:*

"I suppose you are quite a great lawyer," I [David Copperfield] said, after looking at him for some time.

"Me, Master Copperfield?" said Uriah. "Oh, no! I'm a very umble person."

It was no fancy of mine about his hands, I observed; for he frequently ground the palms against each other, as if to squeeze them dry and warm, besides often wiping them, in a stealthy way, on his pocket-handkerchief.

"I am well aware that I am the umblest person going," said Uriah Heep modestly, "let the other be where he may. My mother is likewise a very umble person. We live in a numble abode, Master Copperfield, but have much to be thankful for. My father's former calling was umble. He was a sexton."

"What is he now?" I asked.

"He is a partaker of glory, at present, Master Copperfield, but we have much to be thankful for. How much have I to be thankful for, in living with Mr. Wickfield."

Negative self-feeling may be provoked by a genuine sense of unworthiness or modesty, and when this takes place among religious people, it may become a complete and rapturous submissiveness to God. The records of many mediæval and of some modern mystics emphasize this complete yielding to the will of God, and in His will finding peace. James quotes in this connection Pascal's *Prière pour bien user les maladies:*

I ask you, neither for health nor for sickness, for life nor for death; but that you may dispose of my health and my sickness, my life and my death, for your glory. . . . You alone know what is expedient for me; you are the sovereign master; do with me according to your will. Give to me, or take away from me, only conform my will to yours. I know but one thing, Lord, that it is good to follow you, and bad to offend you. Apart from that, I know not what is good or bad in anything. I know not which is most profitable to me, health or sickness, wealth or poverty, nor anything else in the world. That discernment is beyond the power of men or angels, and is hidden

among the secrets of your Providence, which I adore, but do not seek to fathom.[1]

Self-surrender, however, takes other forms than religious absorption or devotion. "Saintliness" is not unknown in secular forms of life, in the devotion of men to any ideal, despite pain and privation of worldly goods and successes. The doctor sacrificing his life in a leper colony is an extreme example. But something of the same humility and submissiveness is exhibited every time a man makes a choice which places the welfare of other people before his own immediate success. It is shown by the thousands of physicians and settlement workers and teachers who spend their lives in patient devotion to labors that bring little remuneration and as little glory. Men of affairs and a large proportion of other men generally measure worth by worldly success. But even from the worldly, such signs of self-surrender elicit admiration.

Eccentrics. There is one type of self so various and miscellaneous that it can only be subsumed under the general epithet, "eccentric." These are the unexpectedly large number of individuals in our civilization who do not come under any of the usual categories, who display some small or great abnormality which sets them off from the general run of men. That some of these are accounted eccentric is to be explained in the light of man's tendency, as a gregarious animal, to think "queer" and "freakish" anything off the beaten track. Some are clearly and unmistakably abnormal in some physiological or psychological respect. From these are recruited the inmates of our penitentiaries and insane asylums and the candidates for them. But there are eccentricities of social behavior, types of personality which though they cannot be classed as either insane or criminal, yet definitely set an individual apart.

These include what Trotter has called the "mentally unstable," as set over against "the great class of normal, sensible, reliable middle age, with its definite views, its resiliency

[1] Quoted in James: *Varieties of Religious Experience*, p. 286.

to the depressing influence of facts, and its gift for forming the backbone of the State." There are the large group of slightly neurasthenic, made so, in part, by the high nervous tension under which modern, especially modern urban, life is lived. These include what are commonly called the hysterical or over-emotional, or "temperamental" types. In a civilization where most professions demand regularity, restraint, punctuality, and directness, unstability and excess emotionalism are necessarily at a discount. There are the vagabond types who, like young Georges, Jean-Christophe's protégé, regard a profession as a prison house, in which most of one's capacities are cruelly confined. There are again those who, possessing singular and exclusive sensitivity to æsthetic values, to music, art, and poetry, find the world outside their own lyric enthusiasms flat, stale, and unprofitable. If, as so frequently happens, these combine, along with their peculiar temperaments, little genius and slender means, social and economic life becomes for them a blind alley. Every year at our great universities we see small groups of young men, who, having spent three or four years on philosophy, literature, and the liberal arts, and having no interest in academic life, are put to it to find a profession in which they can find a genuine interest or possible success.

Among these "eccentrics" a few have been reckoned geniuses by their contemporaries or by posterity. In such cases society hesitates to apply its usual formulæ. One cannot condemn out of hand a Shelley. He is not of the run of men.

> Shelley was one of those spokesmen of the *a priori*, one of those nurslings of the womb, like a bee or a butterfly, a dogmatic, inspired, perfect, and incorrigible creature. . . . Being a finished child of nature, not a joint product, like most of us, of nature, history, and society, he abounded miraculously in his own clear sense, but was obtuse to the droll miscellaneous lessons of fortune. The cannonade of hard inexplicable facts that knocks into most of us what little wisdom we have, left Shelley dazed and sore, perhaps, but uninstructed.[1]

[1] Santayana: *Winds of Doctrine;* Shelley, p. 159.

It is difficult to draw the line in some cases between genius and insanity.[1] There have been time and again in society Cassandras who have spoken true prophecies and have been thought mad. There have been, on the other hand, those who, having some of the external eccentricities of genius, have given an illusive impression of greatness. The professional Bohemian likes to make himself great by wearing his hair long and living in a garret. But it is unquestionably true that a highly sensitive and creative mind is often ill at ease in the world of action, and remains a vagabond, an *enfant terrible* or an eccentric all through life. It remains a fact that in contemporary society there are a small number of people, some of them of considerable talents, who simply cannot be made to fit into the social routine. For such Bertrand Russell suggests a "vagabond's wage." This he conceives as being just large enough to enable them to get along, to give them a chance to wander and experiment, but sufficiently small to penalize them for not settling down to the accustomed social routines.[2]

Mill has generalized the situation of the genius:

> Persons of genius, it is true, are, and are always likely to be, a small minority; but in order to have them, it is necessary to preserve the soil in which they grow. Genius can only breathe freely in an *atmosphere* of freedom. Persons of genius are, *ex vi termini*, more individual than any other people — less capable, consequently, of fitting themselves, without hurtful compression, into any of the small number of moulds which society provides in order to save its members the trouble of forming their own character. . . . If they are of a

[1] Thus Plato: "But he who, not being inspired and having no touch of madness in his soul, comes to the door and thinks that he will get into the temple by the help of art — he, I say, and his poetry are not admitted; the sane man is nowhere at all when he enters into rivalry with the madman." *Phædrus* (Jowett translation), p. 550.

[2] Russell: *Proposed Roads to Freedom*, p. 177. There was recently introduced to the writer a boy, aged nineteen, for whom this would be an admirable solution. Brought up in a tenement and working as a clerk, this youngster wrote what competent judges pronounced to be really extraordinary lyrics. He was at the same time utterly helpless in the world of affairs. Even at college his casual habits and absorption would have prevented him from getting through his freshman year.

strong character, and break their fetters, they become a mark for the society which has not succeeded in reducing them to commonplace, to point at with solemn warning as "wild," "erratic," and the like; much as if one should complain of the Niagara River for not flowing smoothly between its banks, like a Dutch canal.[1]

The active and the contemplative. One final distinction must be made, one that cuts across all the types of self hitherto discussed, namely, the distinction between the man of action and the man of thought. One need not go far in literature or in life to find the contrast made. In the Scriptures Mary is set over against Martha, Rachel against Leah. Hamlet and Ulysses are permanent representations of the melancholy thinker and the exuberant adventurer. The business man and the executive may be put over against the poet and the scholar; the strenuous organizer and administrator over against the quiet philosopher. Both have their outstanding uses, and, in their extreme forms, their outstanding defects. The active type, as we say, "gets things done." He builds bridges and industries; he manages markets and men. His eye is on the practical; he is dependable, rapid, and efficient. In an industrial civilization he is the great heroic type. The statesman and the railroad builder, the newspaper editors and the political leaders captivate the imaginations as they control the destinies of mankind.

On the other hand, there are those who stand aside (either from incapacity or disinclination or both) from the management of affairs and the life of action, and spend their lives in observation and contemplation. Plato and Aristotle regarded this as the highest type of life; it may have been because they were themselves both philosophers. In its extreme form it is exhibited in such men as Spinoza or Kant, spending their lives in practical obscurity, speculating on time and space and eternity. But it is apparent in less extreme types. The "patient observer," the genial spectator of other men's actions is not infrequent. When he has literary gifts he is a phi-

[1] Mill: *Essay on Liberty*, chap. III.

losopher or a poet. Lucretius in a famous passage stated the contemplative ideal, contrasting it with its opposite:

> Sweet it is when on the great seas the winds are buffeting, to gaze from the land on another's great struggles; not because it is pleasure or joy that any one should be distressed, but because it is sweet to perceive from what misfortunes you yourself are free. Sweet is it, too, to behold great contests of war in full array over the plains, when you have no part in the danger. But nothing is more gladdening than to dwell in the calm high places, firmly embattled on the heights by the teaching of the wise, whence you can look down on others, and see them wandering hither and thither and going astray, as they seek the way of life, in strife matching their wits or rival claims of birth, struggling night and day by surpassing effort to rise up to the height of power and gain possession of the world.[1]

But in the two types it is not the fruit of action or contemplation, but action and contemplation themselves that the two types find respectively interesting. The man of action finds an immediate satisfaction in movement, change, the clamor of affairs, the contacts with other people, the making of changes in the practical world. The man of thought finds as immediate enjoyment in noting the ways of men, and reflecting upon them.

That contemplation, disinterested thinking, also has its use goes without saying. The thinker and the dreamer may be something at least of what the Irish poet boasts:

> " . . . the movers and shakers
> Of the world, forever, it seems."

The scholar, the thinker, the man who stands aside from immediate action, may, often does, help the world of action in a far-reaching way. The researches of a Newton make possible eventually the feats of modern engineering and telegraphy; the abstruse study of the calculus helps to build bridges and skyscrapers.

Both types, in their extremes, have their weaknesses. The extremely practical man "may cut off the limb upon which he is sitting," or "see no further than the end of his nose." A

[1] Lucretius: *De Rerum Natura* (Bailey translation), book II, lines 1–12.

really great administrator is not penny-wise; he thinks far ahead, around and into a problem. He is concerned for to-morrow as well as to-day. The contemplative man may come to be "sicklied o'er with the pale cast of thought." There is the hero of one Russian novel who reflects through three hundred pages on his wasted life, all at the ripe age of twenty-three.[1] The practical man gains width and insight by checking himself with reflection; the contemplative finds thought called home and made meaningful by contacts with the world. It was something of this balance which Plato had in mind when he insisted that his future philosopher-king should, after fifteen years' study, go for fifteen years into the "cave" or world to learn to deal with men and affairs. The "mere theorist" is often an absurd if not a dangerous character; the practical man may come to make the wheels go round without ever taking note of his direction.

As pointed out in the beginning of this discussion, no one of these types is exclusively exemplified in any one individual. To be exclusively any one of these would be to be a caricature rather than a character.[2] But to be no one of these types to any degree at all is to be no character at all, is to be socially a nonentity, a minus quantity; it is to be determined by the vicissitudes of chance or circumstance; it is to be a succession of vacillations rather than a distinctive self-determined personality. Each of these types, moreover, if not extreme, has its specific excellences, and their various presence lends richness and diversity to social life.

Emotions aroused in the maintenance of the self. These various types of self may be defended with bitterness and

[1] Contchareff: *Oblomoff*.

[2] Dickens's success lay, perhaps chiefly, in his ability to draw these unforgettable exaggerations, these outstanding types: "Micawber" waiting for something to turn up; the fiendish cruelty of "Bill Sikes"; the angelic self-effacement of "Little Nell"; the hypocritical "Mr. Pecksniff"; the gossipy "Sairy Gamp." He had a unique gift for representing psychological traits in large. The so-called psychological novelists like Meredith, trace a character through its moods and fluctuations, making truer, more composite, though less memorable characters.

pertinacity, and in their support the most powerful emotions may be enlisted. As pointed out in connection with individuality in opinion, men may be willing to die for their beliefs. Similarly invasion of one's home, infringement or threat against what one regards as one's rights or one's possessions, whether physical or social, may be bitterly contested. And in this conflict in support of the integrity of the self, anger, hate, fear, submissiveness, all the nuances of emotion may be aroused. The themes of great tragedy are built largely on this theme of insistent selfhood. Any obstruction of the self-integrity one has set one's self may provoke a violent reaction. It may be interference with one's love, as in the case of Medea or Othello, the pain of ingratitude as in Lear, the conflict between "the lower and the higher self," as in the case of Macbeth's loyalty and his ambition. These are the staple materials of drama. In common experience, an insult to one's wife or friend, an obstacle placed in the way of one's professional career, deprivation of one's liberty or one's property, or one's unhindered "pursuit of happiness," are the provocations to violent emotions in the sustaining of the self. How violent or what form the reaction will take depends on the situation of the "self" involved. If one has been grossly insulted by another upon whom one is utterly dependent socially and economically, a rankling and impotent rage may be the only outlet. To a person gifted with humility, the disillusions of a false friendship may provoke nothing more than a deep but resigned disappointment. Where passion and determination run high, and retaliation is feasible, a violent hate may find violent fulfillment. In earlier and more bloodthirsty days, the dagger, the duel, and poison were, as illustrated in the history of the Borgias, ways of maintaining the self and venting one's anger or revenge. Even in modern society the still distressingly large number of crimes of violence may be traced in many, perhaps most cases, to blind and bitter hate. To any deep personal injury, hate, whether it takes overt form or not, is still the instinctive

answer; just such hate as Euripides represents in the jealous Medea, when she, a barbarian captive among the Greeks, sees Jason, her lover, about to be married to a Greek princess:

"... But I, being citiless, am cast aside,
By him that wedded me, a savage bride.

. . . . . .

"I ask one thing. If chance yet ope to me
Some path, if even now my hand can win,
Strength to requite this Jason for his sin,
Betray me not! Oh, in all things but this,
I know how full of fears a woman is,
And faints at need, and shrinking from the light
Of battle; but once spoil her of her right
In man's love, and there moves, I warn thee well,
No bloodier spirit between Heaven and Hell." [1]

In defense of the self in its narrower or broader sense, courage and heroism may be displayed. The martyr will die rather than submit; there have been many to whom Patrick Henry's "Give me Liberty or give me death," was something more than rhetoric. The self for which we will fight, of course, varies. A spoilt child will go into a paroxysm of rage if its toy is taken away. Older people will fight for smaller or larger points of social position. There is the familiar citizen who will insist on his rights, often of a petty sort, in a hotel, theater, or department store. Or a man may display the last extremity of courage in defense of some ideal, as in a man's surrender of his life for his country. Something of the same heroism is displayed by individuals who stand out against their group in the face of ridicule or persecution. It is the general sympathy with the desire to preserve one's selfhood untarnished that gives point to Henley's lines:

"Out of the night that covers me,
Black as the pit from pole to pole,
I thank whatever gods may be
For my unconquerable soul.

. . . . . .

"It matters not how strait the gate,
How charged with punishments the scroll,
I am the master of my fate,
I am the captain of my soul." [2]

[1] Euripides: *Medea* (Gilbert Murray translation), p. 16.

[2] *Invictus.*

In the same way as the emotions fear, anger, and hate, and their variations and degrees, may be aroused by attack or threat against the self, so help and encouragement of an individual's selfhood arouse love, affection, and gratitude. Even our affection for our parents, though in part instinctive, is undoubtedly increased by the care and persistence with which they have fostered our own life and hopes, have educated us, and made possible for us a career. The same motives play a part in our affection for teachers who have beneficently influenced our lives, for other older people who "give us a start," advice and encouragement or financial aid. Even the love of God has in religious ritual been colored with gratitude for God's mercies and benevolences.

The individuality of groups. Groups may display the same individuality and sense of selfhood as is exhibited by individuals. And the members of the group may come to regard the group life as something quite as important and inalienable as their own personalities and possessions. Indeed in defense of the integrity of the group life, as in the case, for example, of national honor, the individual life and possession may come to be reckoned as naught. Man's gregariousness and his instinctive sympathy with his own kind make it easy for the individual to identify his own life with that of the group. What threatens or endangers the group will in consequence arouse in him the same emotions as are aroused by threats or dangers that concern his own personality. An insult to the flag may send a thrill of danger through the millions who read about it, just as would an insult to themselves or their families.

Group feeling may exist on various levels. It may be nothing more momentous than local pride, having the tallest tower, the finest amusement park, the best baseball team, or being the "sixth largest city." It may be a belligerent imperialism, a "desire for a place in the sun." It may be a desire for independence and an autonomous group life, manifested so strikingly recently by such small nationalities as

Poland and Czecho-Slovakia and influential in keeping Switzerland alive as a nationality through hundreds of years, though surrounded by powerful neighbors.[1] While a group does not exist save as an abstraction, looked at as a whole it may exhibit the same outstanding traits, or the same types of selfhood as an individual. It may be fiercely belligerent and dogmatic; it may, like literary exponents of the German ideal, desire to spread its own conception of Kultur throughout the world.[2] It may be insistent on its own position, or its own possessions or its own glory. It may be fanatic in aggrandizement. It may be interested in the welfare of other groups, as in the case of large nationalities championing and protecting the causes of small or oppressed ones, such an ideal as was expressed, for example, by President Wilson in his address to Congress on the entrance of America into the Great War:

> . . . We shall fight for the things which we have always carried nearest our hearts — for democracy, for the right of those who submit to authority to have a voice in their own governments, for the rights and liberties of small nations, for a universal dominion of right by such a concert of free peoples as shall bring peace and safety to all nations and make the world itself at last free.[3]

The selfhood displayed by various groups varies with the degree and integration of the individual within the group. In extreme cases, such as that of Germany under the imperial régime, the group individuality may completely overshadow and engulf that of the individual. This ideal was not infrequently expressed by German political writers:

[1] Group feeling may be displayed under the most disadvantageous conditions, as in the strong sentiment for nationalism current among the Jews, even through all the centuries of dispersion.

[2] Thorstein Veblen has pointed out how the "common man" comes to identify his interest with that of the group: "The common man who so lends himself to the aggressive enhancement of the national Culture and its prestige has nothing of a material kind to gain from the increase of renown that comes to his sovereign, his language, his countrymen's art or science, his dietary, or his God. There are no sordid motives in all this. These spiritual assets of self-complacency are indeed to be rated as grounds of high-minded patriotism without afterthought." (*The Nature of Peace*, p. 56.)

[3] Woodrow Wilson: *Address to Congress*, April 2, 1917.

> To us the state is the most indispensable as well as highest requisite of our earthly existence. . . . All individualistic endeavor must be unreservedly subordinated to this lofty claim. . . . The state eventually is of infinitely more value than the sum of the individuals within its jurisdiction. This conception of the state which is as much a part of our life as the blood in our veins, is nowhere to be found in the English constitution, and is quite foreign to English thought, and to that of America as well.[1]

While custom-bound and feudal régimes may emphasize the tendency to suppress development of individuality, and insist on regimentation in thought and action — an ideal proclaimed with increasing generality in Germany from Hegel down [2] there may be on the part of both individuals and groups the tendency to promote individuality as itself a social good. In such a case the social structure and educational systems and methods will be designed to promote individuality rather than to suppress it. Individual variations, if it be generally recognized that they are the only source of progress, will be utilized and cultivated instead of suppressed.[3]

Throughout the nineteenth century (indeed throughout the history of political theory), the pendulum swung beween individualism and complete socialization. Spencer long ago proclaimed the dominance of the individual; T. H. Green, following the German philosophers, the dominance of the state. Like the contrast between egoism and altruism, an emphasis on either side is bound to be artificial. The individual can only be a self in a social order; the individual is only an individual in contrast with others. It is doubtful, for example, whether a man living all his life alone on a desert island would discover any individuality at all. A man's character is displayed in action, and his actions are always, or nearly always, performed with reference to other people. And a man's best self-realization cannot be achieved save in

[1] Eduard Meyer: *England, Its Political Organization and Development and the War Against Germany* (English translation), pp. 30–31.

[2] See Dewey: *German Philosophy and Politics.*

[3] Individuality is the theme of Montessori kindergarten methods.

congenial social order. A man will not readily grow into a saint among a society of sinners, and unless the social order provides opportunities for the highest type of life, it will exist only in a very fortunate and favored few. One of the charges that has been laid against democracy is that it fails to encourage the highest types of scientific and artistic interests, that it is the gospel of the mediocre.[1]

It is too often forgotten, on the other hand, by those who emphasize the importance of society, that society is, after all, nothing more than an aggregate of selves. The "state," the "social order" is nothing but the individuals who make it up, and their relations to each other.

The group exists, after all, even as the most completely socialized political doctrines insist, for the realization of individual selves, for freedom of opportunity and initiative. It is when "individualism" runs rampant, when self-realization on the part of one individual interferes with self-realization on the part of all others that individualism becomes a menace. Individuality is itself valuable, in the first place, because as Mill pointed out in his essay on *Liberty* earlier quoted:

> What has made the European family an improving instead of a stationary portion of mankind? Not any superior excellence in them, which, when it exists, exists as the effect, not the cause; but their remarkable diversity of character and culture. Individuals, classes, nations, have been extremely unlike one another; they have struck out a great variety of paths, each leading to something valuable; and although at every period those who traveled in different paths have been intolerant of one another, and each would have thought it an excellent thing if all the rest could have been compelled to travel his road, their attempts to thwart each other's development have rarely had any permanent success, and each has endured in time to receive the good which the others have offered.[2]

Apart from the variations in group customs and traditions, and their progressive application to changing circumstances

[1] This is the essence of the aristocratic position, that a choice life lived by a few is better than a vulgar one shared by the many.

[2] Mill: *Essay on Liberty*, chap. III.

which individuality makes possible, it cannot be too strongly emphasized that society is the name for the process by which individuals live together. It is the individuals who are the realities and the happiness of individuals which is the aim of social organization. Such happiness is only attainable when individuals are allowed to make the most of their native capacities and individual interests. The social group as a group will be more interesting, colorful, and various when every experimentation and variety of life are encouraged and promoted. And the individuals in such a society will be personalities, not the mere mechanisms of a regimented routine.

CHAPTER IX

INDIVIDUAL DIFFERENCES

The meaning of individual differences. The major part of this volume has been devoted to a consideration of those traits, interests, and capacities which all individuals share, and which may in general be described as the "original nature of man." These distinctive inborn tendencies were treated, for purposes of analysis, in the most general terms, and, on the whole, as if they appeared in the same strength and variety in all individuals. When we thus stand off and abstract those characteristics which appear universally in all individuals, human nature appears constant. But there are marked variations in the specific content of human nature with which each individual is at birth endowed. Put in another way, one might say that to be a human being means to be by nature pugnacious, curious, subject to fatigue, responsive to praise and blame, etc., and susceptible to training in all these respects. By virtue of the fact that we are all members of the human race, we have common characteristics; by virtue that we are *individuals*, we all display specific variations in specific human capacities. There is, save abstractly, no such thing as a standard human being. We may intellectually set up a norm or standard, but it will be a norm or standard from which every individual is bound to vary.

The fact that individuals do differ, and in specific and definable respects, has most serious consequences for social life. It means, briefly, that while general inferences may be drawn from wide and accurate observations of the workings of human nature, these inferences remain general and tentative, and if taken as rigid rules are sure to be misleading. Theories of education and social reform certainly gain from the general laws that can be formulated about original human traits,

fatigue, memory, learning capacity, and the like. But they must, if they are to be applicable, take account also, in a precise and systematic way, of the variety of men's interests and capacities. To this fact of variety in the original nature of different men social institutions and educational methods must be adapted. Arbitrary rules that apply to human nature in general do not apply to the specific cases and specific types of talent and desires. Educational and social organizations can mould these, but the result of these environmental influences will vary with individual differences in original capacities. We can waste an enormous amount of time and energy trying to train a person without mechanical or mathematical gifts to be an engineer. We not only save energy and time, but promote happiness, if we can train individuals so that their specific gifts will be capitalized at one hundred per cent. They will be at once more useful to society and more content with themselves, when they are using to the full their own capacities. They will at once be unproductive and unhappy when they find themselves in activities or social situations where their genuine talents are given no opportunity and where their defects put them at a conspicuous handicap.

Individuals differ, it must further be noted, not only in specific traits, but in that complex of traits which is commonly called "intelligence." In the broadest terms, we mean by an individual's intelligence his competence and facility in dealing with his environment, physical, social, and intellectual. This competence and facility, in so far as it is a native endowment, consists of a number of traits present in a more or less high degree, traits, for example, such as curiosity, flexibility of native and acquired reactions, sociability, sympathy, and the like. In a sense an individual possesses not a single intelligence, but many, as many as there are types of activity in which he engages. But one may classify intelligence under three heads, as does Thorndike:[1] mechanical intelligence, involved in dealing with things; social intelligence, involved in

[1] "Measuring Intelligence," *Harper's Magazine*, March, 1920.

dealing with other persons; and abstract intelligence, involved in dealing with the relations between ideas. Each of these types of intelligence involves the presence in a high degree of a group of different traits. Thus, in social intelligence, a high degree of sympathy, sensitivity to praise and blame, leadership, and the like, are more requisite than they are for intelligent behavior in the realm of mechanical operations or of mathematical theory. A person may be highly intelligent in one of these three spheres and mentally helpless in the others. Thus, a brilliant philosopher may be nonplused by a stalled motor; a successful executive may be a babe in the realm of abstract ideas. But what we rate as a person's general intelligence is a kind of average struck between his various competences, an estimate of his general ability to control himself in the miscellaneous variety of situations of which his experience consists.

There have been a number of tests devised for the purpose of estimating an individual's general intelligence.[1] On a rating scale such as is used in these examinations most individuals will come up to a certain standard that may be called average or normal. There will be a certain number so far below the normal rating in a complex of traits that go to produce intelligent (competent and facile) behavior that they will have to be classed as subnormal, ranging from feeblemindedness to idiocy. A certain number will be found so extraordinarily gifted in general traits and in specific abilities — in given subject-matters, as, for example, in mathematics and music — that they will be marked out as geniuses. Following the laws of probability, the greater the inferiority or superiority, the more exceptional it will be.

[1] These, in large part, deal with words and ideas and are, therefore, weighted in favor of abstract intelligence, and put at a discount individuals whose experience and whose intelligence are predominantly social or mechanical in character. Some of the tests are fairly adequate for mechanical intelligence, but no good tests have been devised for social intelligence. These tests, however, as used in the army and for appraising college entrants, as at Columbia University, have been demonstrated to be fairly good indices of general intelligence.

Individual differences are, therefore, seen to be not simply differences with respect to given mental traits, but differences with respect to general mental capacity. Experimental investigation points to a graded difference in mental capacity, ranging from idiocy to genius, the largest group being normal or average, the size of the group diminishing with further deviation from the average in either direction.

Certain important correlations, furthermore, have been found between the level of intelligence and the level of character. The great in mind, it may be said briefly, are also great in spirit. "General moral defect commonly involves intellectual inferiority. Woods and Pearson find the correlation between intellect and character to be about .5. . . . General moral defect is due in part to a generally inferior nervous organization." [1]

One other important correlation must be noted. While gifts and capacities are specific, superiority in a given trait commonly involves superiority in most others. Exceptional talent in one direction in most cases involves exceptionality in many other respects. While talents are not indiscriminately transferable from one field to another, the same complex of traits which makes a person stand out preëminently in a given field, say law, would make him stand out in any one of half a dozen different fields into which he might have gone. There seems to be no evidence that extraordinary capacity in one direction is balanced by extraordinary incapacity and stupidity in others. The fact that individuals differ not only in specific traits but in general mental capacity has, also, certain obvious practical consequences. It means that there are present in society, in the light of recent tests in the army, an unexpectedly large number of individuals below the level of normal intelligence. One in five hundred, Thorndike estimates, is the "frequency of intellectual ability so defective as to disturb the home, resist school influence, and excite popular derision." These are clearly liabilities in the social order.

[1] Thorndike: *Educational Psychology* (1910), p. 224.

On the other hand, there is a large number above the level of average intelligence. The importance of this group for human progress can hardly be overestimated. As we have seen in other connections, progress is contingent upon variation from the "normal" or the accustomed, and such variation from the normal is initiated in the majority of cases by members of this comparatively small super-normal group. If civilization is to advance it must capitalize its intelligence; that is, educate up to the highest point of native ability. But in any case, its chief guarantee of progress lies in the comparatively small group in whom native ability is exceptionally high. For it is among this group that original thinking, invention, and discovery almost exclusively occur.

Causes of individual differences. Among the chief causes of individual differences may, in general, be set down the following: (1) Sex, (2) Race, (3) Near Ancestry or Family, (4) Environment. The particular fund of human nature which an individual displays, that is, his specific native endowments, as they appear in practice, will be a resultant of these various causes. In the study of each of these characteristics, we should be able ideally to eliminate all the others and to consider them each in isolation.

The influence of sex. In the case of sex, for example, we should not confuse individual differences due to the fact of sex with individual differences due to divergent training given to each of the sexes. In scientific experiments to determine sex differences in mental traits, there have been careful attempts to eliminate everything but the factor of sex itself. Thus in Karl Pearson's studies of fifty twin brothers and sisters, the factors of ancestry and difference of training and age were practically eliminated.

In so far as allowance can be made for other contributing factors, studies of individual differences due to sex have revealed, roughly speaking, the following results. There have been, in the field of sensory discrimination and accuracy of motor response, slight — and negligible — differences of re-

sponses made by male and female. The subjects stated were, in most cases, selected so far as possible from the same social strata, social and intellectual interest, and background.[1]

Thorndike reports the general results of such tests as follows:

The percentages of males reaching or exceeding the median ability of females in such traits as have been subjected to exact investigation are roughly as follows:

In speed of naming colors and sorting cards by color and discriminating colors as in a test for color blindness	24
In finding and checking small visual details such as letters	33
In spelling	33
In school "marks" in English	35
In school "marks" in foreign languages	40
In memorizing for immediate recall	42
In lowness of sensory thresholds	43
In retentiveness	47
In tests of speed and accuracy of association	48
In tests of general information	50
In school "marks" in mathematics	50
In school "marks" (total average)	50
In tests of discrimination (other than for color)	51
In range of sensitivity	52
In school "marks" in history	55
In tests of ingenuity	63
In accuracy of arm movements	66
In school "marks" in physics and chemistry	68
In reaction time	70
In speed of finger and arm movement	71

The most important characteristic of these differences is their small amount. The individual differences within one sex so enormously outweigh the differences between the sexes in these intellectual and semi-intellectual traits that for practical purposes the sex difference may be disregarded. So far as ability goes, there could hardly be a stupider way to get two groups alike within each group but differing between the groups than to take the two sexes. As is well known, the experiments of the past generation in educating women have shown their equal competence in school work of elementary, secondary, and collegiate grade. The present generation's experience is showing the same fact for professional education and business

[1] As, for example, the members of the graduating and junior classes of the co-educational college at the University of Chicago, studied by Dr. Thompson.

service. The psychologists' measurements lead to the conclusion that this equality of achievement comes from an equality of natural gifts, not from an overstraining of the lesser talents of women.[1]

That is, so far as experiments upon objectively measurable traits have been conducted, the specific differences that individuals display have comparatively nothing to do with the fact that an individual happens to be a man or a woman. These experiments have been conducted with boys and girls as young as seven, and with men and women ranging up to the age of twenty-five.[2]

These experiments have been conducted to test sensory discrimination, precision of motor response and some of the simpler types of judgment, such as those involved in the solution of simple puzzles with blocks, matches, etc. The fact of the negligibility of sex difference with regard to certain minor measurable traits has been adequately demonstrated by a wide variety of experiments. The fact of sex equality or mental capacity has been less accurately but fairly universally noted by popular consensus of observation and opinion of the work of women in the various trades and professions. There are differences between men and women in physical strength and in consequent susceptibility to fatigue. These are important considerations in qualifying the amount of work a woman can do as compared with that of a man, and have justly resulted in the regulation of hours for women, as a special class. But there do not seem to be, on the average, significant original differences in mental capacity.[3]

There do exist, as a matter of practical fact, some of the special attributes commonly ascribed to the masculine and feminine mental life, but it is generally agreed by investigators that these are to be accounted for by the different environ-

[1] Thorndike: *Educational Psychology*, briefer course, pp. 345–46.

[2] There seems, as might be expected to be, a slightly higher differentiation between the two sexes after adolescence than before.

[3] On this subject there has been collected a large amount of accurate experimental data. See Goldmark: *Fatigue and Efficiency*, part II, pp. 1–22. These refer to physiological differences.

ment and standards socially established for men and for women. There are radical and subtle differences in training to which boys and girls are subjected from early childhood. There are deeply fixed traditions as to the standards of action, feeling, and demeanor to which boys and girls are respectively trained and to which they are expected to conform. If a boy should not live up to this training and expectation, he may be marked out as "effeminate." If a girl does not conform, she is defined as a "hoyden" or a "tomboy."

These social distinctions, which are emphasized even in the behavior of young boys and young girls, grow more pronounced as individuals grow older. One need hardly call attention to actions regarded as perfectly legitimate for men which provoke disapproval if practiced by women. Rigid training in these different codes of behavior may cause acquired characteristics to seem inborn. But whether these general features commonly held to distinguish the mental life of man or woman are or are not intrinsic and original, they have been marked out by certain investigators as socially fundamental. Thus Heymans and Wiersma, two German investigators, set down as the differentia of feminine mental life (1) greater activity, (2) greater emotionality, (3) greater unselfishness of the female.[1]

There are some general differences noted by both layman and psychologist, which, though not subject to quantitative determination, yet seem to differentiate somewhat definitely between feminine and masculine mental activity. These may be set down in general as occurring in the field of emotional susceptibility. Thorndike traces them back to the varying intensity of two human traits earlier discussed: the fighting instinct, relatively much stronger in the male, and the nursing or mothering instinct, much stronger in the female. With this fact are associated important differences in the conduct of men and women in social relations. The maternal instinct is held by some writers, for instance, to be in

[1] See Thorndike's *Educational Psychology* (1910), p. 136.

large measure the basis of altruism, and is closely associated with sensitivity to the needs and desires of others. Thorndike writes:

> It has been common to talk of women's dependence. This is, I am sure, only an awkward name for less resentment at mastery. The actual nursing of the young seems likewise to involve equally unreasoning tendencies to pet, coddle, and "do for" others. The existence of these two instincts has been long recognized by literature and common knowledge, but their importance in causing differences in the general activities of the two sexes has not. The fighting instinct is in fact the cause of a very large amount of the world's intellectual endeavor. The financier does not think merely for money, nor the scientist for truth, nor the theologian to save souls. Their intellectual efforts are aimed in great measure to outdo the other man, to subdue nature, to conquer assent. The maternal instinct in its turn is the chief source of woman's superiorities in the moral life. The virtues in which she excels are not so much due to either any general moral superiority or any set of special moral talents as to her original impulses to relieve, comfort, and console.[1]

Ordinary observation reveals, as literature has in general recorded, what Havelock Ellis has called the "greater affectability of the female mind." There is evidenced in many women a singular and immediate responsiveness to other people's emotions, a quick intuition, a precise though nonlogical discrimination, which, though shared to some extent by all individuals gifted with sympathy and affection, is a peculiarly feminine quality. Indeed when a man possesses it, it is common to speak of him as possessing "almost a woman's intuition." Such emotional susceptibility is manifested in the higher frequency of emotional instability and emotional outbreaks among women than among men, and the decreased power of inhibition which women have over instinctive and emotional reactions. Further than this, women more than men may be said to qualify their judgments of persons and situations by their emotional reactions to them.

The common suspicion that in general women's abilities are less than those of men has seemed to gain strength from

[1] Thorndike: *loc. cit.*, pp. 48–49.

the greater number of geniuses and eminent persons there have been among men than among women. Professor Cattell writes in this connection:

> I have spoken throughout of eminent men as we lack in English words including both men and women, but as a matter of fact women do not have an important place on the list. They have in all thirty-two representatives in the thousand. Of these eleven are hereditary sovereigns, and eight are eminent through misfortunes, beauty, or other circumstances. Belles-lettres and fiction — the only department in which woman has accomplished much — give ten names as compared with seventy-two men. Sappho and Joan d'Arc are the only other women on the list. It is noticeable that with the exception of Sappho — a name associated with certain fine fragments — women have not excelled in poetry or art. Yet these are the departments least dependent on environment, and at the same time those in which the environment has been perhaps as favorable to women as to men. Women depart less from the normal than men — a fact that usually holds for the female throughout the animal series; in many closely related species only the male can be readily distinguished.[1]

In the facts of higher variability among males, and the hitherto restricted social opportunities provided for women are to be found the chief reasons for the comparatively high achievement of the male sex as compared with the female. But on the average the difference between the two sexes with respect to mental capacity is slight.

The influence of race. A second factor in determining individual differences in mental traits is race. There are certain popular presuppositions as to the inherent differences in the mental activity of different races. The Irishman's wit, the negro's joyousness, the emotionality of the Latin races, the stolidity of the Chinese, are all supposed to be fundamental. And in a sense they are. That is, in the life and culture of these groups, such traits may stand out distinctively. But most psychologists and anthropologists question seriously whether these traits are to be traced to radical differ-

[1] Cattell: "A Statistical Study of Eminent Men," *Popular Science Monthly*, vol. LXII, pp. 375–77.

ences in racial inheritance. For the most part they seem rather to be the result of radical differences in environment. "Many of the mental similarities of an Indian to Indians and of his differences from Anglo-Saxons disappear, if he happens to be adopted and brought up as an Anglo-Saxon." [1]

There have been various experimental studies made to determine how much divergences in the mental activity of different races are determined by differences in racial inheritance. Such experiments have been conducted chiefly upon very simple traits and capacities. The accuracy of sensory response among different races has, for example, been examined. There have proved to be, in regard to these, slight differences in the effectiveness and accuracy of response. There are racial differences in hearing, as tested by the ticking of a watch or clock artificially made. In this test, Papuans, to take an instance, were inferior to Europeans. The sense of touch has been similarly tested, and comparatively negligible differences have been found. In regard to the five senses, their efficiency seems to be about equal in all the races of mankind. The proverbial keenness of vision of the Indian, for example, is found to be due to a superior training in its use, a training made imperative by the conditions of Indian life. In reaction time tests—that is, tests in the speed of simple mental and motor performances—the time consumed in response has been found to be about the same for all races tested. The results have been similar with regard to certain simple processes of judgment or inference:

> There are a number of illusions and constant errors of judgment which are well known in the psychological laboratory, and which seem to depend, not on peculiarities of the sense organs, but on quirks and twists in the process of judgment. A few of these have been made the matter of comparative tests, with the result that peoples of widely different cultures are subject to the same errors, and in about the same degree. There is an illusion which occurs when an object, which looks heavier than it is, is lifted by the hand; it then feels, not only lighter than it looks, but even lighter than it

[1] Thorndike: *loc. cit.*, p. 52.

really is. The contrast between the look and the feel of the thing plays havoc with the judgment. Women are, on the average, more subject to this illusion than men. The amount of this illusion has been measured in several peoples, and found to be, with one or two exceptions, about the same in all. Certain visual illusions, in which the apparent length or direction of a line is greatly altered by the neighborhood of other lines, have similarly been found present in all races tested, and to about the same degree. As far as they go, these results tend to show that simple sorts of judgment, being subject to the same disturbances, proceed in the same manner among various peoples; so that the similarity of the races in mental processes extends at least one step beyond sensation.[1]

Professor Woodworth also points out that these simple tests are not adequate to measure general intelligence.

A good test for intelligence would be much appreciated by the comparative psychologist, since, in spite of equal standing in such rudimentary matters as the senses and bodily movement, attention and the simpler sorts of judgment, it might still be that great differences in mental efficiency existed between different groups of men. Probably no single test could do justice to so complex a trait as intelligence. Two important features of intelligent action are quickness in seizing the key to a novel situation, and firmness in limiting activity to the right direction, and suppressing acts which are obviously useless for the purpose in hand. A simple test which calls for these qualities is the so-called "form test." There are a number of blocks of different shapes, and a board with holes to match the blocks. The blocks and board are placed before a person, and he is told to put the blocks in the holes in the shortest possible time. The key to the situation is here the matching of blocks and holes by their shape; and the part of intelligence is to hold firmly to this obvious necessity, wasting no time in trying to force a round block into a square hole. The demand on intelligence certainly seems slight enough; and the test would probably not differentiate between a Newton and you or me; but it does suffice to catch the feeble-minded, the young child, or the chimpanzee, as any of these is likely to fail altogether, or at least to waste much time in random moves and vain efforts. This test was tried on representatives of several races and considerable differences appeared. As between whites, Indians, Eskimos, Ainus, Filipinos, and Singhalese, the average differences

[1] Woodworth: "Racial Differences in Mental Traits," *Science*, New Series, vol. 31, pp. 179–81.

were small, and much overlapping occurred. As between these groups, however, and the Igorot and Negrito from the Philippines and a few reputed Pygmies from the Congo, the average differences were great, and the overlapping small.[1]

Equality among races in the various traits that have been measured by psychologists does not imply that common observation is wrong in counting one race as intellectually superior to another. There have, as yet, been no measurements of such general features of social life as energy, self-reliance, inventiveness, and the like. But from indications of experiments already made, these so-called (and for practical purposes genuine) intellectual differences between the individuals of different races must be attributed to differences in environment. Races *as* races seem to be equally gifted.

Professor Boas points out that civilized investigators traveling among savage tribes commit one serious fallacy in insisting on the inferiority of these primitive peoples. They are said to be irrational, for example, when they are quite logical in their way of dealing with the material which is at their disposal. Without any scientific information available, for example, anthropomorphism, or the tendency to interpret cosmic phenomena in human terms is quite natural and reasonable. Again:

> The difference in the mode of thought of primitive man and that of civilized man seems to consist largely in the difference of character of the traditional material with which the new perception associates itself. The instruction given to the child of primitive man is not based on centuries of experimentation, but consists of the crude experience of generations. When a new experience enters the mind of primitive man, the same process which we observe among civilized man brings about an entirely different series of associations, and therefore results in a different type of explanation. A sudden explosion will associate itself in his mind, perhaps, with the tales he has heard in regard to the mythical history of the world, and consequently will be accompanied by superstitious fear. When we recognize that neither among civilized men nor among primitive men the average individual carries to completion the attempt at causal

[1] Woodworth: *loc. cit.*, pp. 171–86.

explanation of phenomena, but carries it only so far as to amalgamate it with other previously known facts, we recognize that the result of the whole process depends entirely upon the character of the traditional material.[1]

This may be illustrated by our immediate reactions of pleasure or disgust at customs or ideas that provoke directly opposite reactions among races reared in another tradition.

Again primitive races have been accused of lacking self-control. The fact is that they exhibit self-control about matters which they regard as important, and lack of it in respect to matters which they regard as trivial. "When an Eskimo community is on the point of starvation, and their religious proscriptions forbid them to make use of the seals that are basking on the ice, the amount of self-control of the whole community which restrains them from killing those seals is certainly very great." [2] The case is similar with regard to nearly all the alleged inferiorities of primitive man, his improvidence, unreliability, and the like. In nearly every instance, it has been found that we are holding him to account for not being able to persist in courses of action which do not seem to him, with his training and education, worth persisting in, and for not conforming to standards which, given his background, are meaningless.

But if differences in racial attainments are due to differences in environment, it might be said that this itself is testimony to the superiority of the race that has the more complex and exacting environment. This is not by any means clearly the case. The "culture" or civilization which a race exhibits is a very uncertain index of its gifts or its capacities. The culture found in a race is, it may be said without exaggeration, largely a matter of accident or circumstance rather than of heredity.

Some of the environmental causes for differences in culture may be explicitly noted. Any modern culture is the result of interminglings of many different cross-streams and cross-

[1] Boas: *Mind of Primitive Man*, pp. 203–04. [2] *Ibid.*, p. 108.

borrowings. Races that have long been isolated as, for example, the African negroes, have no possibility of picking up all the acquisitions to which races that intermingle have access. Progress in the developments of arts, sciences, and institutions depends on fortunate individual variations. The smaller the race the less the number of variations possible, including those on the side of what we call genius. Again fortunate variations depend not so much on the general average intellectual capacities of the race as on its variability. So one race may possess a relative superiority of achievement because of its high variability, just as, as we have already pointed out, the greater preëminence of the male sex with regard to intellectual accomplishment is due to the greater number of variations both above and below the norm which it displays. The reasons for variability are again, according to Professor Boas, largely environmental. "We have seen, when a people is descended from a small uniform group, that then its variability will decrease; while on the other hand, when a group has a much-varied origin or when the ancestors belong to entirely distinct types the variability may be considerably increased." [1]

Again a race may be placed in such geographical conditions that a fortuitous variation on the part of one individual may prove of enormous value in the development of its civilization. Or fortunate geographical conditions may stimulate types of activity that lie dormant, although possible, among other races. Thus by some investigators the flexibility and emancipation of the Greek genius were attributed to their access to the sea and their constant intermingling with other cultures, especially the Egyptian.

On the subject of the fundamental equality of races despite their seeming disparity, as that at present, let us say, between whites and negroes, Professor Boas writes:

Much has been said of the hereditary characteristics of the Jews,

[1] Boas: *loc. cit.*, p. 93.

of the Gypsies, of the French and Irish, but I do not see that the external and social causes which have moulded the character of members of these people have ever been eliminated satisfactorily; and, moreover, I do not see how this can be accomplished. A number of external factors that influence body and mind may easily be named — climate, nutrition, occupation — but as soon as we enter into a consideration of social factors and mental conditions we are unable to tell definitely what is cause and what is effect.

. . . . . .

The conclusions reached are therefore, on the whole, negative. We are not inclined to consider the mental organization of different races of man as differing in fundamental points. Although, therefore, the distribution of faculty among the races of man is far from being known, we can say this much: the average faculty of the white race is found to the same degree in a large proportion of individuals of all other races, and although it is probable that some of these races may not produce as large a proportion of great men as our own race, there is no reason to suppose that they are unable to reach the level of civilization represented by the bulk of our own people.[1]

In contrast must be cited the opinions of a large class of psychologists and anthropologists who are inclined to regard racial differences as intrinsic and original. Of such, for example, is Francis Galton, who claims in his *Hereditary Genius*, that taking negroes on their own ground they still are inferior to Europeans by about one eighth the difference, say, between Aristotle and the lowest idiot. Recent psychological experiments in the army reveal, again, certain fundamental intellectual inferiorities of negroes, though whether this is environmental or to be traced to hereditary causes is open to question.

The fact remains that there are, despite the lack of evidence for hereditary mental differences, practical differences in the mental activity of different races that are of social importance. These differences, which seem so fundamental, have been explained primarily by the powerful control exercised over the individual by the habits which he acquires even before the

[1] Boas: *loc. cit.*, pp. 116, 123.

age of five years. These, though unconscious, may be, as the Freudian psychologists maintain, all the more important for that reason. This would appear to be the only explanation of significant racial differences. Cultural differences cannot, biologists are generally agreed, be transmitted in the germs that pass from generation to generation. One may say, in effect, that an individual is differentiated in his mental traits by early association with a certain race, and by his immediate ancestry or family, rather than by the fact of belonging physically to a certain race.

The influence of immediate ancestry or family. A factor that is, on experimental evidence, rated to be of high importance in the determination of the differences of the mental make-up of human beings, is "immediate ancestry" or family. Stated in the most simple and general terms this means that children of the same parents tend to display marked likenesses in mental traits, and to exhibit less variation among themselves than is exhibited in the same number of individuals chosen at random. A great number of experiments have been conducted to determine how far resemblances in mental traits are due to common parentage. The correlation between membership in the same family and resemblances of social traits has been found to be uniformly high.

The inference was made that children of the same family would show great resemblances in mental traits, when accurate experiments showed marked similarity in physical traits under the same conditions. The coefficient of correlation between brothers in the color of the eye, is, according to the results obtained by Karl Pearson, .52.[1] The coefficient of fraternal correlation in the case of the cephalic index (ratio of width to length of head) is .40. The correlation of hair

[1] These facts are based on the reports of Karl Pearson in his *On the Laws of Inheritance in Man.* What is meant by coefficient of correlation may be explained as follows: If the coefficient of correlation between father and son is .3 and the coefficient of correlation between brother and brother is .5 we may say: a son on the average deviates from the general trend of the population by .3 of the amount of his father's deviation, a brother by .5 of the amount of his brother.

color is found to be .55. The fact of high correlation between resemblance of physical traits and membership in the same family is of crucial importance, because these traits are clearly due to ancestry, and not to environmental differences. If physical traits show such a correlation, it is likely that mental traits will also, mental traits being ultimately dependent on the brain and the nervous system, which are both affected by ancestry.

Measurements of measurable traits and observations of less objectively measurable ones, have revealed that immediate ancestry is in itself an influential factor in producing likenesses and differences among men with respect to mental traits. One interesting case, interesting because it was a test of a capacity that might be expected to be largely environmental in its origins, was that of the spelling abilities of children in the St. Xavier School in New York. Thorndike thus reports the test:

> As the children of this school commonly enter at a very early age, and as the staff and the methods of teaching remain very constant, we have in the case of the 180 brothers and sisters included in the 600 children closely similar school training. Mr. Earle measured the ability of any individual by his deviation from the average for his grade and sex, and found the co-efficient of correlation between children of the same family to be .50. That is, any individual is on the average fifty per cent as much above or below the average for his age and sex as his brother or sister.
>
> Similarities in home training might theoretically account for this, but any one experienced in teaching will hesitate to attribute much efficacy to such similarities. Bad spellers remain bad spellers though their teachers change. Moreover, Dr. J. M. Rice in his exhaustive study of spelling ability found little or no relationship between good spelling and any one of the popular methods, and little or none between poor spelling and foreign parentage. Yet the training of a home where parents do not read or spell the language well must be a home of relatively poor training for spelling. Cornman's more careful study of spelling supports the view that ability to spell is little influenced by such differences in school or home training as commonly exist.[1]

[1] Thorndike: *loc. cit.*, p. 78.

In general the influence of heredity may be said far to outweigh the influence of home training. In all the cases reported, the resemblances were about the same in traits subject to training, and in those not subject to training. Thus industry and conscientiousness and public spirit, which are clearly affected by environment, show no greater resemblance than such practically unmodifiable traits as memory, original sensitiveness to colors, sounds, and distances.

The influence of parentage, it must be added, consists in the transmission of specific traits, not of a certain "nature" as a whole. There are in the germ and the ovum which constitute the inheritance of each individual, certain determinant elements. The elements that determine the original traits with which each individual will be born vary, of course, in the germs produced by a single parent less than among individuals chosen at random, but they vary none the less. In this variation of the determining elements in the germs of the same individual is to be found the cause of the variation in the physical and mental traits among children of the same parents.

Since the determining elements, the unit characters that appear in the sperm or ovum of each individual, do not appear uniformly even in children of the same parents, brother and sister may resemble each other in certain mental traits, and differ in others. "A pair of twins may be indistinguishable in eye color and stature, but be notably different in hair color and tests of intellect."

Mental inheritance, as well as physical, is, then, organized in detail. It is not the inheritance of gross total natures, but of particular "mental traits." If we had sufficient data, we should be able to analyze out the unit characters of an individual's mental equipment, so as to be able to predict with some accuracy the mental inheritance of the children of any two parents. In the case of physical inheritance, the laws of the hereditary transmission of any given traits are known in considerable detail. The detailed quantitative investigations

of inheritance, following the general lines set by Mendel, have given striking results.

Physical traits have been found to be analyzable into unit-characters (that is, traits hereditarily transmitted as units), such as "curliness of hair," "blue eyes," and the like. Mental traits, however, do not seem analyzable into the fixed unit-characters prescribed by the Mendelian laws of inheritance.

The success which breeders have had in the control of the reproduction of plants and animals, in the perpetuation of a stock of desirable characteristics and the elimination of the undesirable, has given rise to a somewhat analogous ideal in human reproduction. That eugenics has at least its theoretical possibilities with regard to physical traits, few biologists will question. However difficult it may be in practice to regulate human matings on the exclusive basis of the kind of offspring desired, it is a genuine biological possibility. In a negative way, it has already in part been initiated in the prevention of the marriage of some extreme types of the physically unfit, by the so-called eugenic marriage laws in some states in this country.[1]

But whether scientific regulation of marriages for the production of eugenic offspring is feasible, even apart from the personal and emotional questions involved, is open to question. No mental trait such as vivacity, musical ability, mathematical talent, or artistic sense, has been analyzed into such definitely transmissible unit-characters as "blue eyes" and "curliness of hair." So many unit-characters seem to be involved in any single mental trait that it will be long before a complete analysis of the hereditary invariable determinants of any single trait can be made.

It is thus impossible to tell as yet with any security or precision the biological components of any single mental trait.

[1] There have been laws, as there is a fairly decided public opinion, adverse to reproduction by the feeble-minded and the morally defective. But (see Richardson: *The Etiology of Arrested Mental Development*, p. 9) there have been a number of cases of feeble-minded parents producing normal children.

The evidence at our disposal, however, does confirm us in the belief that one of the most significant and certain causes of individual differences, whether physical or mental, is immediate ancestry or family. Individuals are made by what they are initially, and, as we shall presently see, therefore largely by their inheritance. With the latter, environment can do just so much, and no more. And the most significant and effective part of an individual's inheritance is his family for some generations back, rather than the race to which he belongs.

The influence of the environment. Those factors so far discussed which determine individual differences are independent of the particular conditions of life in which an individual happens to be placed. An individual's race, sex, family are beyond modification by anything that happens to him after birth. Maturity, in so far as it is mere growth independent of training, is also largely a fixed and unmodifiable condition.

The original nature, determined by race, sex, and immediate ancestry, with which a man starts life is subject to modification by his social environment, by the ideas, customs, companions, beliefs, by which he is surrounded, and with which he comes continuously in contact. Commonly the influence of environment is held to be very high. It is difficult, however, accurately to distinguish between effects which are due to original nature and effects which are due to environment.

Differences in training are important, but the results vary with the natures trained. Precisely the same environment will not have the same consequences for two different natures. Two approximately same natures will show something like the same effects in dissimilar environments. Human beings are certainly differentiated by the customs, laws, ideals, friends, and occupations to which they are exposed. But what the net result will be in a specific case, depends on the individual's equipment to start with, an equipment that is fixed before the environment has had a chance to act at all.

The kindliness and indulgence that save some children demoralize others. In some people a soft answer turneth away wrath; in others it will kindle it. Andrew Carnegie starts as a bobbin boy, and becomes a millionaire; but there were many other bobbin boys. The sunset that stirs in one man a lyric, leaves another cold. The same course in biology arouses in one student a passion for a life of science; it leaves another hoping never to see a microscope again. On the other hand, the same types of original capacity thrown into different environments will yet attain somewhat comparable results, in the way of character and achievement. The biographies of a few poets, painters, philosophers, and scientists chosen at random, show the most diverse antecedents.[1]

An individual, again, to a certain extent, makes his own environment. What kind of an environment he will make depends on the kinds of capacities and interests he has to start with. Similarity of original tendencies and interests brings men together as differences among these keep them apart. The libraries, the theaters, and the baseball parks are all equally possible and accessible features of their environment to individuals of a given economic or social class. Yet a hundred individuals with the same education and social opportunities will make themselves by choice a hundred different environments. They will select, even from the same physical environment, different aspects. The Grand Cañon is a different environment to the artist and to the geologist; a crowd of people at an amusement park constitutes a different environment to the man who has come out to make psychological observations, and the man who has come out for a day's fun. A dozen men, teachers and

[1] Taking the social and professional status of a distinguished man's father as some index of the social environment to which he was subjected during his youth, we find some interesting examples: The father of John Keats was a livery stable-keep; his mother the daughter of one. Byron's father was a captain in the Royal Guards; his mother a Scottish heiress. Newton's father was a tanner; Pasteur's, a tanner; Darwin's, a doctor of considerable means. Francis Bacon's father was Lord Keeper of the Great Seal; Newton's was a farmer and the headmaster of a school; Turner was the son of a barber.

students, selected at random on a university campus, might well be expected to note largely different though overlapping facts, as the most significant features of the life of the university.

The environment is the less important in the moulding of character, the less fixed and unavoidable it becomes. If an individual has the chance to change his environment to suit his own original demands and interests, these are the less likely to undergo modification. This is illustrated in the animal world by the migratory birds, which change their habitations with the seasons. Similarly human beings, to suit the original mental traits with which they are endowed, can and do exchange one environment for another. There are a very large number of individuals living in New York City, in the twentieth century, for example, for whom a multiplicity of environments are possible. The one that becomes habitual with an individual is a matter of his own free choice. That is, it is choice, in the sense that it is independent of the circumstances of the individual's life. But an individual's choice of his environment must be within the limited number of alternatives made possible by the original nature with which he is endowed. As pointed out in connection with our discussion of "Instinctive Behavior," we do originally what gives satisfaction to our native impulses, and avoid what irritates and frustrates them. We may be trained to find satisfactions in acquired activities, but there is a strong tendency to acquire habits that "chime in," as it were, with the tendencies we have to start with.

There is, for example, to certain individuals, intrinsic satisfaction in form and color; to others in sound. To the former, pictures and paintings will tend to be the environment selected; to the latter the hearing and the playing of music. To those gifted with sensitivity in neither of these directions, pictures may be through all their lives a bore, and a piano a positive nuisance.

These facts of original nature, therefore, determine initially,

and consequently in large part, what our environment is going to be. Once we get into, or select through instinctive desires, a certain kind of environment, those desires become strengthened through habit, and that environment becomes fixed through fulfilling those habitual desires. A man may, in the first place, choose artists or scholars as companions because his own gifts and interests are similar. But such an environment will become the more indispensable for him when it has the reinforcement of habit to confirm what is already initially strong in him by birth. "To him who hath shall be given" is most distinctly true of the opportunities and environment open to those with native gifts to begin with.

Original nature thus sets the scope and the limits of an individual's character and achievement. It tells "how much" and, in the most general way, "what" his capacities are. Thus a man born with a normal vocal apparatus can speak; a man born with normal vision can see. But what language he shall speak, and what sights he shall see, depend on the social and geographical situation in which he happens to be placed. Again, if a man is born with a "high general intelligence," that is, with keen sensory discriminations and motor responses, precise and accurate powers of analysis of judgment, a capacity for the quick and effective acquisition and modification of habits, we can safely predict that he will excel in some direction. But whether he will stand out as a lawyer, doctor, philosopher, poet, or executive, it is almost impossible from original nature to tell.[1]

Individual differences — Democracy and education. The fact that individuals differ in ability and interest has important consequences for education and social progress. It means, in the first place, that while current optimistic doctrines about the modifiability of human nature are true, they are true within limits — limits that vary with the individual.

[1] The psychological tests used in the army, and being used now with modifications in the admission of students to Columbia College, are "general intelligence" tests. That is, they show general alertness and intellectual promise, but are not prophetic of any specialized talents or capacities.

Whether or not we shall ever succeed, through the science or the practice of eugenics, in eliminating low ability and perpetuating high exclusively, the fact remains that there are in contemporary society the widest variations both in the kinds of interest and ability displayed, and in their relative efficacy under present social and industrial conditions.

There are, it must be noted at the outset, a not inconsiderable number of individuals who must be set down as absolute social liabilities. Even if existing social and educational arrangements were perfect, these would remain unaffected and unavailable for any useful purpose. They would have to be endowed, cared for, or confined. There is the quite considerable class, who, while normal with respect to sensory and motor discrimination, seem to be seriously and irremediably defective in their powers of judgment. These also seem to offer invulnerable resistance to education, and their original natures would not be subject to modification even by an education perfectly adapted to the needs of normal people.

But the more significant fact, more significant because it affects so many, is the fact that within the ranks of the great class of normal people, there are fundamental inherited differences in ability and interest. Next in importance to the fact that an individual is human is the fact that he is an individual, with very specific initial capacities and desires. For education the implications are serious. Education aims, among other things, to give the individual habits that will enable him to deal most effectively with his environment. But an individual can be trained best, it goes without saying, in the capacities and interests he has to begin with. Education cannot, therefore, be wholesale in its methods. It must be so adjusted as to utilize and make the most of the multifarious variety of native abilities and interests which individuals display. If it does not utilize these, and instead sets up arbitrary moulds to which individuals must conform, it will be crushing and distorting the specific native activities which are the only raw material it has to work upon.

There have not as yet been many detailed quantitative studies of individual differences that would enable educators, if they were free to do so, scientifically to adapt education to specific needs and possibilities. Beginnings in this direction are being made, though rather in advanced than in more elementary education. Professional and trade schools, and group-electives in college courses are attempts in this direction. Any attempt, of course, to adapt education to specific needs and interests, instead of crushing them into *a priori* moulds, requires, of course, a wider social recognition and support of education than is at present common. For individual differences require attention. And where millions are to be educated, individual attention requires an immense investment in teaching personnel.

But in this utilization of original interests and capacities lies the only possibility of genuinely effective education.[1] In the first place to try in education to give individuals habits for which they have no special innate tendencies to begin with, is costly. Secondly, to train individuals for types of life or work for which their gifts and desires are ill adapted is to promote at once inefficiency and unhappiness. One reason why the chance to identify one's life with one's work (as is the case with the artist and the scholar) is so universally recognized as good fortune, is because it is so rare. A general and indiscriminate training of men, as if they were all fitted with the same talents and the same longings, does as much as underpayment or overwork to impair the quality of the work done and the satisfaction derived from it.

It has latterly been recognized that industry offers the crucial opportunity to utilize to the fullest individual differ-

[1] A beginning in the application of this principle has been made by the vocational guidance and employment management work which is being done with increasing scientific accuracy throughout the United States. Individual differences and interests are studied with a view to putting "the right man in the right place." This slogan is borrowed from the Committee on Classification and Personnel, which during the Great War, through its trade tests and other machinery of differentiation, utilized for the national welfare the specific abilities of thousands of drafted men.

ences. By "getting the right man in the right place," we at once get the work done better and make the man better satisfied. If adequate attention is given to "placement," to the specific demands put upon men by specific types of work, and to the specific capacities of individuals for fulfilling those demands, we will be capitalizing variations among men instead of being handicapped by them. As it is, specific differences do exist, and men enter occupations and professions ignoring them. As a result both the job and the man suffer; the former is done poorly, and the latter is unsuccessful and unhappy.

It must be noted that the existence of specific differences between individuals does not altogether, or often even in part, imply superiority or inferiority. It implies in each case inferiority or superiority with respect to the performance of a particular type of work. Whether scientific insight and accuracy is better than musical skill, whether a gift for salesmanship surpasses a gift for mathematics, depends on the social situation and the standards that happen to be current among the group. An intensely disagreeable person may be the best man for a particular job. All scientific observation can do is to note individual differences, to note what work makes demands upon what capacities, and try to bring the man and the job together.

It must be emphasized that, while individual capacities determine what an individual can do, social ideals and traditions determine what he will do, because they determine what he will be rewarded and encouraged to do. There is no question but that in our industrial civilization certain types of ability, that of the organizer, for example, have a high social value. There is no question but that there are other abilities, which under our present customs and ideals we reward possibly beyond their merit, as, to take an extreme case, that of a championship prize fighter. We can through education and vocational guidance utilize all native capacities. To make provision for the utilization of all native

capacities is to have an efficient social life. But to what end our efficient human machinery shall be used depends on the ideals and customs and purposes that happen to be current in the social order at any given time.

In the words of Professor Thorndike, "we can invest in profitable enterprises the capital nature provides." But what profiteth a man or a society, is a matter for reflective determination; it is not settled for us, as are our limitations, at birth.

The net result of scientific observation in this field is the discovery, in increasingly precise and specific form, that men are most diverse and unequal in interest and capacity. The ideal of equality comes to mean, under scientific analysis, equality of opportunity, leveling all social inequalities; the fact of natural inequalities and divergences remains incontestable.

There may even be, as recent psychological tests seem to indicate, a certain proportion of individuals who are not competent to take an intelligent part in democratic government, who, having too little intellectual ability to follow the simplest problem needing coöperative and collective decision, must eternally be governed by others. If these facts come to be authenticated by further data, it merely emphasizes the fact that in a country professedly democratic it is essential to devise an education that will, in the case of each individual, educate up to the highest point of native ability.

Where a country is ostensibly democratic, a few informed citizens will govern the many uninformed, unless the latter are educated to an intelligent knowledge and appreciation of their political duties and obligations. Furthermore, the citizens of a community who are prevented from using their native gifts will be both useless and unhappy. Certainly this is an undesirable condition in a society where all individuals are expected, so far as possible, to be ends in themselves and not merely means for the ends of others.

CHAPTER X

LANGUAGE AND COMMUNICATION[1]

It was earlier pointed out that human beings alone possess language. They alone can make written symbols and heard sounds stand for other things, for objects, actions, qualities, and ideas. In this chapter the consideration of language may best be approached from the spoken tongue, under the influence of which, except in the simplest type of pictorial writing, the written form develops.[2]

From the point of view of the student of behavior, language, spoken language especially, is a habit, acquired like walking or swimming. It is made possible primarily by the fact that human beings possess a variety and flexibility of vocal reflexes possessed by no other animal. All the higher animals have a number of vocal reflexes, which are called out primarily in the expression of emotion or desire. Cries of pain, hunger, rage, sex desire or desire for companionship, are common to a great number of the animal species. But these cries and vocal utterances are limited, and comparatively unmodifiable. They are moreover expressed, so far as experimental observation can reveal, with no consciousness of the specific significance of particular sounds and are used as the involuntary expression of emotion rather than as a specific means of communication.

. . . The primates have a much larger number of such vocal instincts than the other mammals, and a much larger number of stimuli can call them out, *e.g.*, injury to bodily tissue calls out one group; hunger calls out a certain group; sex stimuli (mate, etc.) another; and similarly cold, swiftly moving objects, tones, strange animals

[1] Much of the technical material for this chapter is drawn from Leonard Bloomfield's *The Study of Language*, and W. D. Whitney's *The Life and Growth of Language*.

[2] Bloomfield: *loc. cit.*, pp. 7–8.

call out others. When attachments are formed between the female and her offspring another large group is called into action. There is no evidence to show in the case of mammals that these vocal instincts are modified by the sounds of other animals. . . . These throat habits may be cultivated to such an extent in birds that we may get an approximation, more or less complete, to a few such habits possessed by the human being. Such throat habits, however, are not language habits.[1]

In human beings language, it is clear, may attain extraordinary refinement and complexity, and may convey extremely fine shades and subtleties of emotion or idea. This results from the fact that man is born with a vocal apparatus far superior in development to that of any of the animals.

It is pretty clear that the mutant man, when thrown off from the primate stock, sprang forth with a vocal apparatus different from that of the parent stock, and possessing abundant richness in reflexes, even far surpassing that found in the bird. It is interesting to observe, too, in this connection, that within the narrow space occupied by the vocal apparatus we have a system of muscular mechanisms which has within it, looking at it now as a whole, the same possibilities of habit formation that we find in the remaining portion of bodily musculature. . . . It is probable that in a few years we shall undertake the study of such habits from exactly the same standpoint that we now employ in studies upon the acquisition of skill in the human being.[2]

The human baby starts its expressive habits by emitting with wide-open mouth an undifferentiated shriek of pain. A little later it yells in the same way at any kind of discomfort. It begins before the end of the first year to croon when it is contented. As it grows older it begins to make different sounds when it experiences different emotions. And with remarkable rapidity its repertoire of articulatory movements has greatly increased.

Speech that begins in the child as a mere vague vocal expression of emotion soon begins to exhibit a marked element of mimicry. The child begins to associate the words uttered

[1] Watson: *Behavior*, p. 323.

[2] *Ibid.*, pp. 323–24.

by his nurse or parents with the specific objects they point to. He comes to connect "milk," "sleep," "mother" with the experiences to which they correspond. The child thus learns to react to certain sounds as significant of certain experiences. Unlike Adam, he does not have to give names to animals, or for that matter to anything else on earth. They all have specific names in the particular language in which he happens to be brought up. In the case of other habits, largely through trial and error, he learns to associate given sounds expressed by other people about him with given experiences, pleasant or unpleasant. He learns further to imitate, so far as possible, these sounds, as a means of more precisely communicating his wants or securing their fulfillment.

In this connection students of language frequently have raised the question of how man first came to associate a given sound-sequence with a given experience. Like fire, language was once conceived to be a divine gift. Another theory postulated a genius who took it into his head to give the things of earth their present inevitable names. One other theory equally dubious held that language started in onomatopoetic expressions like "Bow-wow," for dog. Still another hypothesis once highly credited held that the sounds first uttered were the immediate and appropriate expressions called out by particular types of emotional experience. The validity of the last two theories has been rendered particularly dubious. The very instances of imitative words cited, words like "cuckoo," "crash," "flash," were, in their original forms, quite other than they are now. And that words are not immediately apposite expressions of the emotions which they represent, has been generally recognized. In gesture language, the gesture has to remain fairly imitative or expressive to be intelligible. But an examination of half a dozen casual words in contemporary languages shows how arbitrary are the signs used, and how little appositeness or relevance they bear in their sound to the sense which they represent. The detailed study of the perfectly regular changes that so

largely characterize the evolution of language, have revealed the inadequacy of any of these views. There seems to be, in fact, no explanation of the origin of the language any more than there is of the origin of life. All that linguistic science can do is to reveal the history of language. And in this history, human language stands revealed as a highly refined development of the crude and undifferentiated expressions which, under emotional stress, are uttered by all the animals.

Language as a social habit. Language, as has repeatedly been pointed out, is essentially social in character. It is, in the first place, primarily an instrument of communication between individuals, and is cultivated as such. In human speech, interjections like "Oh!" or "Ah!" are still involuntary escapes of emotion, but language develops as a vehicle of communication to others rather than as a mere emotional outlet for the individual. Even if it were possible for the mythical man brought up in solitude on a desert island to have a language, it is questionable whether he would use it. Since language is a way of making our wants, desires, information known to others, it is stimulated by the presence of and contact with others. Excess vitality may go into shouting or song,[1] but language as an instrument of specific utterance comes to have a more definite use and provocation. Man, as already pointed out, is a highly gregarious animal, and language is his incomparable instrument for sharing his emotions and ideas and experience with others. The whole process of education, of the transmission of culture from the mature to the younger members of a society, is made possible through this instrument, whereby achievements and traditions are preserved and transmitted in precise and public terms.

Secondly, language is social in that, for the individual at least, it is socially acquired. The child first imitates sounds without any consciousness of their meaning, just as he imi-

[1] Human song is by some linguistic experts, including Bloomfield, held to have originated in the chant of rhythmic labor, as in rowing or threshing.

tates other actions in sheer "physiological sympathy." But he learns soon, by watching the actions of other people, that given sounds are always performed when these others do given actions. He learns that some sounds are portents of anger and punishment; still others of satisfaction and pleasure. He learns soon to specify his utterances, to use sounds as specific stimuli, to attain through other people specific satisfactions. The child is born with a flexible set of reflexes. In which way they shall be developed depends entirely on the accident of the child's environment. Whether he shall call it "bread" or "pain" or "brod," depends on the particular social environment in which he from the first hears that particular item of experience referred to. A child of American missionaries in Turkey picks up the language of that country as well as that of his own. An English child brought up under a French nurse may learn with perfect ease the foreign tongue, and to the exclusion of that of his native country. Indeed, so completely subject is one in this regard to one's early environment, that it is not only difficult in later life to acquire a new pronunciation, but one finds it impossible to breathe freely, as it were, in the whole psychological atmosphere of a foreign language. Its grammatical categories, its spelling, its logic seem hopelessly irrational. It was perfectly natural of the Englishman in the story, when he was told that the French called it "pain," to insist, "Well, it's bread, anyhow." Many a reader of a foreign language which has become habitual can still not refrain from translating, as he reads, what seem to him irrational idioms into the familiar, facile, and sensible modes of his native tongue.

Language and mental life. The connection of language with thought has repeatedly been noted. It has even been questioned whether thought in any effective sense is possible without words. In general it may be said that thinking demands clean-cut and definite symbols to work with, and that language offers these in incomparable form. A word enables one to isolate in thought the dominant elements of an experi-

ence and prevents them from "slipping through one's fingers."

The importance of having words by which concepts may be distinguished and isolated from one another will become clearer by a brief reminder of the nature of reflection. Thinking is in large part (as will be discussed in detail in chapter XIII) concerned with the breaking-up of an experience into its significant elements. But experience begins with objects, and so far as perceptual experience is concerned, ends there. We perceive objects, not qualities, actions, or ideas apart from objects. And the elements into which thinking analyzes an experience are never present, save in connection with, as parts of, a sensibly perceived object. Thus we never perceive whiteness save in white objects; warmth save in warm objects; red save in red objects. We never, for that matter, perceive so abstract a thing as an "object." We experience red houses or red flags; white flowers, white shoes, white paper; warm stoves, warm soup, and warm plates. Even houses and stoves and shoes are, in a sense, abstractions. No two of these are ever alike. But it is of the highest importance for us to have some means of identifying and preserving in memory the significant resemblances between our experiences. Else we should be, as it were, utterly astounded every time we saw a chair or a table or a fork. Though they may, in each case in which we experience them, differ in detail, chairs, tables, forks have certain common features which we can "abstract" from the gross total experience, and by a word or "term," define, record, communicate, and recall. The advantage of a precise technical vocabulary over a loose "popular" one is that we can by means of the former more accurately single out the specific and important elements of an experience and distinguish them from one another. The common nouns, or "general names" in a language indicate to what extent and in what manner that language, through some or other of its users, classifies its experiences. Highly developed languages make it possible to classify similarities

not easily detected in crude experience. They make it possible to identify other things than merely directly sensed objects.

In primitive languages experience is described and classified only in so far as it is perceptual. In other words, primitive languages have names for objects only, not for ideas, qualities, or relations. Thus it is impossible in some Indian languages to express the concept of a "brother" by the same word, unless the "brother" is in every case in the same identical circumstances. One cannot use the same word for "man" in different relations: "man-eating," "man-sleeping," "man-standing-here," and "man-running-there" would all be separate compound words. Among the Fuegians there is one word which means "to look at one another, hoping that each will offer to do something which both parties desire but are unwilling to do." [1] Marett writes in this connection:

> Take the inhabitants of that cheerless spot, Tierra del Fuego, whose culture is as rude as that of any people on earth. A scholar who tried to put together a dictionary of their language found that he had got to reckon with more than thirty thousand words, even after suppressing a large number of forms of lesser importance. And no wonder that the tally mounted up. For the Fuegians had more than twenty words, some containing four syllables, to express what for us would be either "he" or "she"; then they had two names for the sun, two for the moon, and two more for the full moon, each of the last named containing four syllables and having no elements in common.[2]

It is easy to see how very little refinement or abstraction from experience could be made with such a cumbersome and inflexible vocabulary. The thirty thousand word vocabulary expressed a poverty of linguistic technique rather than a richness of ideas.

At the other extreme stands a language like English, which is, to an extraordinary degree, an "analytic" language. It has comparatively no inflections. This means that words can be used and moved about freely in different situations and rela-

[1] Marett: *Anthropology*, p. 140. [2] *Ibid.*, pp. 138–39.

tions. Thus the dominant elements of an experience can be freely isolated. A noun standing for a certain object or relation is not chained to a particular set of accompanying circumstances. "Man" stands as a definite concept, whether it be used with reference to an ancient Greek, a wounded man, a brave, a wretched, a competent, or a tall man. We can give the accompanying circumstances by additional adjectives, which are again freely movable verbally and intellectually. Thus we can speak of a brave child and a tall tower as well as a brave man and a tall man. In Marett's words:

> The evolution of language then, on this view, may be regarded as a movement away from the holophrastic [compound] in the direction of the analytic. When every piece in your playbox of verbal bricks can be dealt with separately, because it is not joined on in all sorts of ways to the other pieces, then only can you compose new constructions to your liking. Order and emphasis, as is shown by English, and still more conspicuously by Chinese, suffice for sentence-building. Ideally, words should be individual and atomic. Every modification they suffer by internal change of sound, or by having prefixes or suffixes tacked on to them, involves a curtailment of their free use and a sacrifice of distinctness. It is quite easy, of course, to think confusedly, even whilst employing the clearest type of language. . . . On the other hand, it is not feasible to attain a high degree of clear thinking, when the only method of speech available is one that tends toward wordlessness — that is to say, one that is relatively deficient in verbal forms that preserve their identity in all contexts.[1]

Languages differ not only in being more or less analytic, but in their general modes of classification. That is, not only do they have more or less adequate vocabularies, but in their syntax, their sentence structure, their word forms, they variously organize experience. It is important to note that in these divergent classifications no one of them is more final than another. We are tempted, despite this fact, to think that the grammar, spelling, and phonetics of our own language constitute the last word in the rational conveyance of thought.

[1] Marett: *loc. cit.*, pp. 141–42.

The instability of language. Language being a social habit, it is to be expected that it should not stay fixed and changeless. The simpler physiological actions are not performed in the same way by any two individuals, and no social practice is ever performed in the same way by two members of a group, or by two different generations. In this connection writes Professor Bloomfield:

> The speech of former times, wherever history has given us records of it, differs from that of the present. When we read Shakspere, for example, we are disturbed by subtle deviations from our own habits in the use of words and in construction; if our actors pronounced their lines as Shakspere and his contemporaries did we should say that they had an Irish or German brogue. Chaucer we cannot read without some grammatical explanation or a glossary; correctly pronounced his language would sound to us more like Low German than like our English. If we go back only about forty generations from our time to that of Alfred the Great, we come to English as strange to us as modern German, and quite unintelligible, unless we study carefully both grammar and lexicon.[1]

There are, in general, three kinds of changes that take place in a language. "Phonetic" changes, that is, changes in the articulation of words, regardless of the meaning they bear. This is illustrated simply by the word "name" which, in the eighteenth century was pronounced ne'm. "Analogic" changes, that is, changes in the articulation of words under the influence of words somewhat similar in meaning. The word "flash," for example, became what it is because of the sound of words associated in meaning, "crash," "dash," "smash." The third process of change in language alters not only the articulate forms of words, not only their sound, but their sense. All these changes, as will be presently pointed out, can easily be explained by the laws of habit early discussed in this book, these laws being applicable to the habit of language as well as to any other.

In the case of phonetic change, it is only to be expected that the sounds of a language will not remain eternally changeless.

[1] Bloomfield: *loc. cit.*, p. 195.

A language is spoken by a large number of individuals, no two of whom are gifted with precisely the same vocal apparatus. In consequence no two of them will utter words in precisely the same way. Before writing and printing were general, these slight variations in articulation were bound to have an effect on the language. People more or less unconsciously imitate the sounds they hear, especially if they are not checked up by the written forms of words. Even to-day changes are going on, and writing is at best a poor representation of phonetics. The Georgian, the Londoner, the Welshman and the Middle Westerner can understand the same printed language, precisely because it does not at all represent their peculiarities of dialect. Variant sounds uttered by one individual may be caught up in the language, especially if the variant articulation is simpler or shorter. Thus the shortening of a word from several syllables to one, though it starts accidentally, is easily made habitual among a large number of speakers because it does facilitate speech. In the classic example, pre-English, "habeda" and "habedun" became in Old English, "hæfde" and "hæfdon," and are in present English (I, we) "had." [1] In the same way variations that reduce the unstressed syllables of a word readily insinuate themselves into the articulatory habits of a people. In the production of stressed syllables, the vocal chords are under high tension and the breath is shut in. It is easier, consequently, to produce the unstressed syllables "with shortened, weakened articulations . . . lessening as much as possible all interference with the breath stream." [2] Thus "contemporaneous prohibition" becomes "kn̥tempəˈɹejnjəs pn̥həˈbifn̥." Sound changes thus take place, in general, as lessenings of the labor of articulation, by means of adaptation to prevailing rest positions of the vocal organs. They take place further in more or less accidental adaptations to the particular speech habits of a people. That is, those sounds become discarded that do not fit in with the general articulatory tendencies of

[1] Bloomfield: *loc. cit.*, p. 211.

[2] *Ibid.*, p. 212.

a language. Of this the weakening of unstressed syllables in English and palatalization in Slavic are examples.[1]

These changes of sound in language so far discussed are made independently of the meaning of words. Other changes in articulation occur, as already noted, by analogy of sound or meaning. That is, words that have associated meanings come to be similarly articulated. This is simply illustrated in the case of the child who thinks it perfectly natural to assimilate by analogy "came" to "come." Thus the young child will frequently say, until he is corrected, he "comed," he "bringed," he "fighted." In communities where printing and writing and reading are scarce, such assimilation by analogy has an important effect in modifying the forms of words.

Changes in meaning. The changes in language most important for the student of human behavior are changes in meaning. Language, it must again be stressed, is an instrument for the communication of ideas. The manner in which the store of meanings in a language becomes increased and modified (the etymology of a language) is, in a sense, the history of the mental progress of the people which use it. For changes in meaning are primarily brought about when the words in a language do not suffice for the larger and larger store of experiences which individuals within the group desire to communicate to one another. The meanings of old words are stretched, as it were, to cover new experiences; old words are transferred bodily to new experiences; they are slightly modified in form to apply to new experiences analogous to the old; new words are formed after analogy with ones already in use.

A simple illustration of the application of a word already current to a wider situation is the application of the word "head" as a purely objective name, to a new experience, which has certain analogies with the old; as when we speak of a "head" of cabbage, the "head" of an army, the "head"

[1] *Ibid.*, p. 218.

of the class, or the "headmaster." In many such cases the transferred meaning persists alongside of the old. Thus the word "capital" used as the name for the chief city in a country, persists alongside of its use in "capital" punishment, "capital" story, etc. But sometimes the transferred meaning of the word becomes dominant and exclusive. Thus "disease" (dis-ease) once meant discomfort of any kind. Now it means specifically some physical ailment. The older use has been completely discarded. To "spill" once meant, in the most general sense, to destroy. Now all the other uses, save that of pouring out, have lapsed. "Meat" which once meant any kind of nourishment has now come to refer almost exclusively (we still make exceptions as in the case of sweetmeat) to edible flesh. Whenever the special or novel application of the word becomes dominant, then we say the meaning of the word has changed.

Mental progress is largely dependent on the transfer of words to newer and larger spheres of experience, the modification of old words or the formation of new ones to express the increasing complexity of relations men discover to exist between things. In the instances already cited some of the transferred words lost their more general meaning and became specialized, as in the case of "meat," "spill," etc. Other words, like "head," though they may keep their specific objective meaning, may come to be used in a generalized intellectual sense. One of the chief ways by which a language remains adequate to the demands of increasing knowledge and experience of the group is through the transfer of words having originally a purely objective sense to emotional and intellectual situations. These words, like "bitter," "sour," "sharp," referring originally only to immediate physical experiences, to objects perceived through the senses, come to have intellectual and emotional significance, as when we speak of a "sour" face, a "bitter" disappointment, a "sharp" struggle. Most of our words that now have abstract emotional or intellectual connotations were once words referring

exclusively to purely sensible (sense perceptual) experiences. "Anxiety" once meant literally a "narrow place," just as when we speak of some one having "a close shave." To "refute" once meant literally "to knock out" an argument. To "understand" meant "to stand in the midst of." To "confer" meant "to bring together." Sensation words themselves were once still more concrete in their meaning. "Violet" and "orange" are obviously taken as color names from the specific objects to which they still refer. Language has well been described as "a book of faded metaphors." The history of language has been to a large extent the assimilation and habitual mechanical use of words that were, when first used, strikingly figurative.

The novel use of a word that is now a quite regular part of the language may in many cases first be ascribed to a distinguished writer. Shakespeare is full of expressions which have since, and because of his use of them, become literally household words. Many words that have now a general application arose out of a peculiar local situation, myth, or name. "Boycott" which has become a reasonably intelligible and universal word, only less than fifty years ago referred particularly and exclusively to Boycott, a certain unpopular Irish landowner who was subjected to the kind of discrimination for which the word has come to stand. "Burke" used as a verb has its origin in the name of a notorious Edinburgh murderer. Characters in fiction or drama, history or legend come to be standard words. Every one knows what we mean when we speak of a Quixotic action, a Don Juan, a Galahad, a Chesterfield. To tantalize arises from the mythical perpetual frustration of Tantalus in the Greek story. Expressions that had a special meaning in the works of a philosopher or littérateur come to be generally used, as "Platonic love." [1] Again words that arise as mere popular witticisms or vulgarisms may be brought into the language as permanent acquisitions. "Mob," now a quite

[1] Though this is very loosely and inaccurately used.

legitimate word, was originally a shortening of *mobile vulgum*, and was, only a hundred years ago, suspect in polite discourse.

Outside the deliberate invention by scientists of terms for the new relations they have discovered, more or less spontaneous variation in the use of words and their unconscious assimilation by large numbers with whose other language habits they chance to fit, is the chief source of language growth. One might almost say words are wrenched from their original local setting, and given such a generalized application that they are made available for an infinite complexity of scientific and philosophical thought.

Uniformities in language. Thus far we have discussed changes in language from the psychological viewpoint, that is, we have considered the human tendencies and habits which bring about changes in the articulation and meaning, in the sound and the sense, of words. It is evident from these considerations that there can be no absolute uniformity in spoken languages, not even in the languages of two persons thrown much together. Within a country where the same language is ostensibly spoken, there are nevertheless differences in the language as spoken by different social strata, by different localities. There are infinite subtle variations between the articulation and the word uses of different individuals. There are languages within languages, the dialects of localities, the jargon of professional and trade groups, the special pronunciations and special and overlapping vocabularies of different social classes.

But while there are these many causes, both of individual difference and of differing social environments, why languages do not remain uniform, there are similar causes making for a certain degree of uniformity within a language. There is one very good reason why, to a certain extent, languages do attain uniformity; they are socially acquired. The individual learns to speak a language from those about him, and individuals brought up within the same group will consequently learn to

speak, within limits, the same tongue; they will learn to articulate through imitation, and, while no individual ever precisely duplicates the sounds of others, he duplicates them as far as possible. He learns, moreover, as has already been pointed out, to attach given meanings to given words, not for any reason of their peculiar appositeness or individual caprice, but because he learns that others about him habitually attach certain meanings to certain sounds. And since one is stimulated to expression primarily by the desire and necessity of communication of ideas a premium is put upon uniformity. It is of no use to use a language if it conceals one's thoughts. In consequence, within a group individual variations, unless for reasons already discussed they happen to lend themselves to ready assimilation by the group, will be mere slips of the tongue. They will be discarded and forgotten, or, if the individual cannot rid himself of them, will like stammering or stuttering or lisping be set down as imperfections and social handicaps. The uniformity of language within groups whose individual members have much communication with each other is thus to a certain extent guaranteed. A man who is utterly individualistic in his language might just as well have no language at all, unless for the satisfaction of expressing to himself his own emotions.[1] Language is learned from the group among whom one moves, and those sounds and senses of words are, on the whole, retained, which are intelligible to the group. Those sounds and meanings will best be understood which are already in use. No better illustration could be found of how custom and social groups preserve and enforce standards of individual action.

The obverse of the fact that intercommunication promotes uniformity in language is that lack of communication brings about language differentiation. The less the intercommunication between groups, the more will the languages of the

[1] There have been a few poets, like Emily Dickinson, or mystics like Blake, some of whose work exhibits almost complete unintelligibility to most readers, though doubtless it had a very specific meaning and vividness to the writers concerned.

groups differ, however uniform they may be within the groups themselves. The most important factor in differentiation of language is local differentiation. In some European countries every village speaks its own dialect. In passing from one village to another the dialects may be mutually intelligible, but by the time one has passed from the first village in the chain to the last, one may find that the dialect of the first and last are utterly unintelligible to each other. A real break in language, as opposed to dialect variations, occurs where there is a considerable barrier between groups, such as a mountain range, a river, a tribal or political boundary. The more impenetrable the barriers between two groups the more will the languages differ, and the less mutually intelligible will they be.

Looking back over the history of language the student of linguistics infers that those languages which bear striking or significant similarities are related. Thus Spanish, Italian, French, Portuguese, and Roumanian are traceable directly back to the Latin. This does not mean that all over the areas occupied by the speakers of these languages Latin was originally spoken. But the Romans in their conquests, both military and cultural, were able to make their own language predominant. The variations which make French and Roumanian, say, mutually unintelligible, are due to the fact that Latin was for the natives in these conquered territories assimilated to their own languages. So that, in the familiar example, the Latin "homo" becomes "uomo" in Italian, "homme" in French, "hombre" in Spanish, and "om" in Roumanian. Similarly related but mutually unintelligible languages among the American Indians have been traced to three great source-languages.

The history of European languages offers an interesting example of differentiation. English and German, for example, are both traceable back to West-Germanic; from that in turn to a hypothecated primitive West-Germanic. All the European languages are traceable back to a hypothe-

cated Primitive Indo-European.[1] The theory held by most students of this subject is that the groups possessing this single uniform language spread over a wider and wider area, gradually became separated from each other by geographical barriers and tribal affiliations, and gradually (and on the part of individual speakers unconsciously) modified their speech so that slight differences accumulated, and resulted finally in widely different and mutually unintelligible languages.

The process of differentiation in the languages of different groups is very marked. We find, for example, in the early history of Greece and Rome, a number of widely different dialects. There seems every evidence that these were derived from some more primitive tongue. We find, likewise, on the American continent, several hundred different languages, which — to the untrained observer — bear not the slightest resemblance to each other. This welter and confusion can also be traced back to a few primitive and uniform languages.

Thus the history of civilization reveals this striking differentiation in the language of different groups, a counter-tendency making for a wider uniformity of particular languages. One "favored dialect" becomes standard, predominant and exclusive. Thus out of all the French dialects, the one that survives is the speech of Paris; Castilian becomes standard Spanish, and in ancient Greece the language of Athens supersedes all the other dialects. The reasons for the survival of one out of a great welter of dialects may be various. Not infrequently the language of a conquering people has, in more or less pure form, succeeded the language of the conquered. This was the case in the history of the Romance languages, which owe their present forms to the spread of Roman arms and culture. There was, as is well known, a

[1] By the word "primitive" the linguistic experts mean a language the existence of which is inferred from common features of several related languages, of which written records are current, but of which no actual records exist. Thus, if there were no written records of Latin the approximate reconstruction of it by linguists would be called "Primitive Romance."

similar development in the case of the English language. The Norman Conquest introduced, under the auspices of a socially superior and victorious group, a language culturally superior to the Anglo-Saxon. The latter was, of course, not entirely replaced, but profoundly modified, especially in the enrichment and enlargement of its vocabulary. One has but to note such words as "place," "choir," "beef," etc., which came entirely to replace in the language the indigenous Anglo-Saxon names for those objects.

Colonization and commercial expansion may bring about the replacement of the native language of special localities by the language of the colonizers, at least in hybrid form. The spread of English through Australia, and through the larger part of North America, the spread of Spanish through South America, in each instance practically replacing the native tongues, are cases in point.[1]

Standardization of language. At the present time, and for some time in the past, the differentiation of language has been greatly lessened by the stabilizing influence of print. The printed word continually recalls the standard pronunciation and meaning, and the changes in language (save those deliberately introduced by the addition of scientific terms, or the official modifications of spelling, etc., as in some European countries [2]) are much less rapid, various, and significant than hitherto. It is true that differences in articulation and usage, especially the former, do still, to a degree, persist and develop. Our Southern accent, with its drawling of words and slurring of consonants, our Middle-Western accent, with its stressed articulation of "r's" and its nasalizing tendencies, are instances of this persistence.

But the printed language — English, for example — the official language, which is published in the newspapers, peri-

[1] Dialects and jargons are often the result of the partial assimilation by the speakers of one language of another language to which they are exposed. French-Canadian and Pennsylvania Dutch are examples of such a mixture.

[2] In France the Ministry of Education from time to time settles points of orthography definitely.

odicals, and books, which is taught in the schools, and spoken from the pulpit, the platform, on the stage, in cultivated society, is more or less alike all over the United States and wherever English is spoken. It is, of course, only a standard, a norm, an ideal, which like the concept of the circle, never quite appears in practice. The language which is spoken, even in the conversation of the educated, by no means conforms to the ideal of "correct usage." But the important fact is that the standard language *is* a standard, that it is, moreover, a widely recognized and effective standard. The dictionaries and the grammars become authoritative, and are referred to when people consciously set about discovering what *is* the accepted or correct meaning or pronunciation. But a more effectual authority is exerted by the teaching they receive at school, and the continuous, though unnoticed, influence of the more or less standard language which they read in print.

Even phonetic changes, though they persist, are checked from spreading to the point of mutually unintelligible dialects by the standards enforced in print. The "accents" in various parts of the United States, for example, differ, but not to the point of becoming absolutely divergent languages. The Southerner and the Westerner may be conscious in each other's speech of a quaint and curious difference in pronunciation, but they can, except in extreme cases, completely understand each other.[1]

The most important stabilizing influence of print, however, is its fixation of meanings. It makes possible their maintenance uncorrupted and unmodified over wide stretches in which there are phonetic variations. These variant articulations in different parts of a large country where the same language is spoken, would, if unchecked, eventually modify the

[1] Some of the isolated districts in the Kentucky mountains reveal dialects with some important differences in vocabulary and construction. These are shown most strikingly in some of the ballads of that region which have been collected by William Aspinwall Bradley, and by Howard Brockway. Rural schools and the breakdown of complete isolation will probably in time eliminate this divergence.

sense of words. Print largely prevents this from happening. One can read newspapers published in Maine, California, Virginia, and Iowa, without noticing any significant, or, in many cases, even slight differences in vocabulary or construction. There are, of course, local idioms, but these persist in conversation, rather than in print, save where they are caught up and exploited for literary purposes by a Bret Harte, a Mark Twain, or an O. Henry.

Counter-tendencies toward differentiation. While the *standard* language does become fixed and stable, there are, in the daily life of different social groups, varying actual languages. Every class, or profession, every social group, whether of interest, or occupation, has its slight individuality in articulation or vocabulary. We still observe that members of a family talk alike; sometimes households have literally their own household words. And on different economic and social levels, in different sports, intellectual, professional, and business pursuits, we notice slightly different "actual" languages. These partly overlap. The society lady, the business man, the musician, the professor of literature, the mechanic, have specializations of vocabulary and construction, but there is, for each of them, a great common linguistic area. Every individual's speech is a resultant of the various groups with whom he associates. He is affected in his speech habits most predominantly, of course, by his most regular associates, professional and social. In consequence we still mark out a man, as much as anything, by the kind of language he speaks. The mechanic and the man of letters are not likely to be mistaken for each other, if overheard in a street car. Many literary and dramatic characters are memorable for their speech habits. Such types are successful when they do hit upon really significant linguistic peculiarities. Their frequent failures lie in making the language of a particular social type artificially stable. No one ever talks quite as the conventional stage policeman, stage professor, and stage Englishman talk.

These actual variations in the language, as it is used by various groups who are brought up under the same standard language, operate to prevent complete stabilization of language. Such variations are remarkably influential, considering the conservative influences upon language of the repeated and continuous suggestion made by the printed page. The language is, in the first place, being continually enriched through increments of new words and modifications of old ones, from the special vocabularies of trades, professions, sciences, and sports. Through some accidental appositeness to some contemporaneous situation, these may become generally current. A recent and familiar example is the term "camouflage," which from its technical sense of protective coloration has become a universally understood name for moral and intellectual pretense. The vocabulary of baseball has by this time already given to the language words that show promise of attaining eventual legitimacy. An increasingly large source of enrichment of the native tongue comes from the "spontaneous generation" of slang, which, starting in the linguistic whimsicality of one individual, gets caught up in conversation, and finds its ultimate way into the language. Important instruments, certainly in the United States, in spreading such neologisms are the humorous and sporting pages of the newspapers, in which places they not infrequently originate.[1] Whether a current slang expression will persist, or perish (as do thousands initiated every year),

[1] H. L. Mencken in his suggestive book, *The American Language*, sees in this upshoot of phrases indigenous to the soil and the temper of the American people, and of grammatical constructions also, symptoms of the increasing divergence of the American from the English language. That there are a large number of special expressions exclusively used in the United States, and parts of the United States, that are not found in use in England, goes without saying. Every one knows that the Englishman says "lift" where we say "elevator," "shop," where we are likely to say "store." There are significant differences to be found even in the casual expressions of American and English newspapers. But it is doubtful whether the divergence can go very far, in view of the constant intercommunication, the rapidity of travel between the two countries, and the promiscuous reading of English books in America, and American books in England.

depends on accidents of contemporary circumstances. If the expression happens to set off aptly a contemporary situation, it may become very widespread until that situation, such as a political campaign, is over. But it may, like the metaphor of a poet, have some universal application. "Log-rolling," "graft," "bluff," have come into the language to stay. Roosevelt's "pussy-foot," and "Ananias Club" are, perhaps, remembered, but show less promise of permanency. "Movies" has already ceased to be a neologism, its ready adoption illustrating a point already mentioned, namely, that a variation that facilitates speech (as "movies" does in comparison with "moving pictures," or "motion pictures") has a high potentiality of acceptance.

Language as emotional and logical. Since language is primarily useful as an instrument of communication, it should ideally be a direct and clean-cut representation of experience. It should be as unambiguous, and immediate, as telegraphy, algebra, or shorthand. But language has two functions, which interfere with one another. Words not only represent logical relations; they provoke emotional responses. They not only explicitly tell; they implicitly suggest. They are not merely skeletons of thought; they are clothed with emotional values. They are not, in consequence, transitive vehicles of thought. Words should, from the standpoint of communication, be mere signals to action, which should attract attention only in so far as they are signals. They should be no more regarded as things in themselves than is the green lamp which signals a locomotive engineer to go ahead. They should be as immediate signals to action as, at a race, the "Ready, set, go" of the starter is to the runner. Yet this rarely happens in the case of words. They frequently impede or mislead action by arousing emotions irrelevant to their intellectual significance, or provoke action on the basis of emotional associations rather than on their merits, so to speak, as logical representations of ideas.

To take an example: England, as an intellectual symbol,

may be said to be a name given to a small island bounded by certain latitudes and longitudes, having a certain distribution of raw materials and human beings, and a certain topography. It might just as well be represented by X for all practical purposes. Thus in the secret code of the diplomatic corps if X were agreed on as the symbol for England, it would be just as adequate and would even save time. But England (that particular sound) for a large number of individuals who have been brought up there, has become the center of deep and far-reaching emotional associations, so that its utterance in the presence of a particular listener may do much more than represent a given geographical fact. It may be associated with all that he loves, and all that he remembers with affection; it may suggest landscapes that are dear to him, a familiar street and house, a particular set of friends, and a cherished historical tradition of heroic names and storied places. It may arouse such ardor and devotion as Henley expresses in his famous *England, my England:*

"What have I done for you,
England, my England,
What is there I would not do,
England, my own?
With your glorious eyes austere,
As the Lord were walking near,
Whispering terrible things and dear,
As the song on your bugles blown,
England —
Round the world on your bugles blown!"

Words thus become powerful provocatives of emotion. They become loaded with all the energies that are aroused by the love, the hate, the anger, the pugnacity, the sympathy, for the persons, objects, ideas, associated with them. People may be set off to action by words (just as a bull is set off by a red rag), although the words may be as little freighted with meaning as they are deeply weighted with emotion.

Poets and literary men in general exploit these emotional values that cling to words. Indeed, in epithets suggesting

illimitable vistas, inexpressible sorrows, and dim-remembered joys, lies half the charm of poetry.

"Before the beginning of years,
There came to the making of man,
Time with a gift of tears,
Grief with a glass that ran;
Pleasure with pain for a leaven,
Summer with flowers that fell;
Remembrance fallen from Heaven,
And madness risen from Hell,
Strength without hands to smite,
Love that endures for a breath,
Night the shadow of light,
And life, the shadow of death." [1]

Swinburne does not, to be sure, give us much information, and what there is is mythical, but he uses words that are fairly alive with suggested feeling.

But this emotional aura in which words are haloed, beautiful though it is in literature, and facile though it makes the communication of common feelings, is a serious impediment in the use of words as effective instruments of communication. Language oscillates, to speak metaphorically, between algebra and music. To be useful as an instrument of thought it should keep to the prosaic terseness of a telegraphic code. One should be able to pass immediately from the word to the thing, instead of dissolving in emotions at the associations that the mere sound or music of the epithet arouses. Words should, so to speak, tend to business, which, in their case, is the communication of ideas. But words are used in human situations. And they accumulate during the lifetime of the individual a great mass of psychological values. Thus, to take another illustration, "brother" is a symbol of a certain relationship one person bears to another. "Your" is also a symbolic statement of a relation. But if a telegram contains the statement "Your brother is dead," it is less a piece of information to act on than a deep emotional stimulus to which one responds. Bacon long ago pointed out how men "worshipped

[1] Swinburne: *Atalanta in Calydon* (David Mackay edition), p. 393.

words." As we shall see presently, he was thinking of errors in the intellectual manipulation of words. Perhaps as serious is the inveterate tendency of men to respond to the more or less irrelevant emotions suggested by a word, instead of to its strict intellectual content. If the emotions stirred up by an epithet were always appropriate to the word's significance, this might be an advantage. But not infrequently, as we shall see immediately, words suggest and may be used to suggest emotions that, like "the flowers that bloom in the spring," have nothing to do with the case.

In practice, political and social leaders, and all who have to win the loyalties and support of masses of men have appreciated the use — and misuse — that might be made of the emotional fringes of words. Words are not always used as direct and transparent representations of ideas; they are as frequently used as stimuli to action. A familiar instance is seen in the use of words in advertisements. Even the honest advertiser is less interested in giving an analysis of his product that will win him the rational estimation and favor of the reader than in creating in the reader through the skillful use of words, emotions and sympathies favorable to his product. The name of a talcum powder or tobacco is the subject of mature consideration by the advertising expert, because he knows that the emotional flavor of a word is more important in securing action than its rational significance.[1] "Ask Dad! He knows!" does not tell us much about the article it advertises, but it gives us the sense of secure trust that we had as a boy in those mysterious things in an almost completely unknown world which our fathers knew and approved.

On a larger scale, in political and social affairs words are powerful provocatives of emotion and of actions, determining to no small degree the allegiances and loyalties of men and

[1] It has been pointed out that such an expression as "cellar door," considered merely from the viewpoint of sound, is one of the most romantically suggestive words in the English language. A consideration of some of the names of biscuits and collars will show a similar exploitation of both the euphony and the emotional fringes of words.

the satisfaction and dissatisfactions which they experience in causes and leaders. A word remains the nucleus of all the associations that have gathered round it in the course of an individual's experience, though the object for which it stands may have utterly changed or vanished. This is illustrated in the history of political parties, whose personnel and principles change from decade to decade, but whose names remain stable entities that continue to secure unfaltering respect and loyalty. In the same way, the name of country has emotional reverberations for one who has been brought up in its traditions. Men trust old words to which they have become accustomed just as they trust old friends. To borrow an illustration from Graham Wallas, for many who call themselves Socialists, Socialism is something more than

> a movement towards greater social equality, depending for its force upon three main factors, the growing political power of the working classes, the growing social sympathy of many members of all classes, and the belief, based on the growing authority of scientific method, that social arrangements can be transformed by means of conscious and deliberate contrivance.[1]

Rather

> the need for something for which one may love and work has created for thousands of workingmen a personified Socialism: Socialism, a winged goddess with stern eyes and a drawn sword, to be the hope of the world, and the protector of those that suffer.[2]

Political leaders and advertising experts, no less than poets, have recognized the importance of the suggestive power of words. Half the power of propaganda lies in its arousing of emotions through suggestion, rather than in its effectiveness as an instrument of intellectual conversion.[3]

Language and logic. Even where words are freed from

[1] Wallas: *Human Nature in Politics*, p. 92. [2] *Ibid.*, p. 93.

[3] During the recent Liberty Loan campaigns, for example, when it was of the most crucial practical importance that bonds be bought, the stimuli used were not in the form of reasoned briefs, but rather emotional admonition: "Finish the job," "Every miser helps the Kaiser," "If you were out in No Man's Land."

irrelevant emotional associations, they are still far from being adequate instruments of thought. To be effectively representative, words must be clean-cut and definitive; they must stand for one object, quality, or idea. Words, if they are to be genuine instruments of communication, must convey the same intent or meaning to the listener as they do to the speaker. If the significance attached to words is so vague and pulpy that they mean different things to different men, they are no more useful in inquiry and communication than the shock of random noise or the vague stir and flutter of music. Words must have their boundaries fixed, they must be terms, fixed and stable meanings, or they will remain instruments of confusion rather than communication. Francis Bacon stated succinctly the dangers involved in the use of words:

> For men imagine that their reason governs words, whilst in fact words react upon the understanding; and this has rendered philosophy and the sciences sophistical and inactive. Words are generally formed in a popular sense, and define things by those broad lines which are most obvious to the vulgar mind; but when a more acute understanding or more diligent observation is anxious to vary these lines, and adapt them more accurately to nature, words oppose it. Hence the great and solemn disputes of learned men terminate frequently in mere disputes about words and names, in regard to which it would be better to proceed more advisedly in the first instance, and to bring such disputes to a regular issue by definitions. Such definitions, however, cannot remedy the evil . . . for they consist themselves of words, and these words produce others. . . .

If, to take an extreme case, a speaker said the word "chair," and by "chair" his listener understood what we commonly mean by the word "table," communication would be impossible. There must be some common agreement in the words used. In the case of simple terms referring to concrete objects there are continual concrete reminders of the meaning of a word. We do not make mistakes as to the meaning of words such as chair, river, stone, stove, books, forks, knives,

[1] *Novum Organum*, bk. I, aphorism 59.

because we so continually meet and use them. We are continually checked up, and the meanings we attach to these cannot go far astray.

But the further terms are removed from physical objects, the more opportunity is there for ambiguity. In the realm of politics and morals, as Socrates was fond of pointing out, the chief difficulties and misunderstandings of men have come from the ambiguities of the terms they use. "Justice," "liberty," "democracy," "good," "true," "beautiful," these have been immemorial bones of contention among philosophers. They are accepted, taken for granted, without any question as to their meaning by the individual, until he finds, perhaps, in discussion that his acceptation of the term is entirely different from that of his opponent. Thus many an argument ends with "if that's what you mean, I agree with you." Intellectual inquiry and discussion to be fruitful must have certain definitive terms to start with.

> Discussion . . . needs to have the ground or basis of its various component statements brought to consciousness in such a way as to define the exact value of each. The Socratic contention is the need compelling the common denominator, the common subject, underlying the diversity of views to exhibit itself. It alone gives a sure standard by which the claims of all assertions may be measured. Until this need is met, discussion is a self-deceiving play with unjudged, unexamined matters, which, confused and shifting, impose themselves upon us.[1]

To define our terms means literally to know *what* we are talking about and what others are talking about. One of the values of discussion is that it enables us more clearly to realize the meaning of the words with which we constantly operate. A man may entertain for a long while a half-conscious definition of democracy as meaning political equality, and suddenly come face to face with another who means by it industrial coöperation and participation on the part of all workers. Whether he agrees with the new definition or not, at least his own becomes clearer by contrast.

[1] Dewey: *Essays in Experimental Logic*, p. 200.

"Science," wrote Condillac, "is a well-made language." No small part of the technique of science lies in its clear definition of its terms. The chemist knows what he means by an "acid," the biologist by a "mammal." Under these names he classifies all objects having certain determinable properties. Social science will never attain the precision of the physical sciences until it also attains as clear and unambiguous a terminology. As we shall see in the chapter on science, however, the definitions in the physical sciences are arrived at through precise inquiries not yet possible in the field of social phenomena.

CHAPTER XI

RACIAL AND CULTURAL CONTINUITY

That the history of the race is an unbroken continuum goes without saying. What this means in the way of transmission of the arts, the sciences, the religion, the ideas, the customs of one generation to the next, we shall presently see. Cultural continuity is made possible by the more fundamental fact of the actual biological continuity of the race. This biological continuity extends back, as far as we can infer from the scientific evidence, unbrokenly through the half million years since man has left traces of his presence on earth. The continuity of life itself goes back to that still more remote time when man and ape were indistinguishable, indeed to that postulated epoch when life as it existed on earth was no more complex than it is as it now appears in the one-celled animal. Evolution has taught us that life, however it started, has been one long continuous process which has increased in complexity from the unicellular animals to man.

The continuity of the human race is a contrivance of nature rather than of man. It is, as it were, a by-product of the sex instinct. Man is endowed natively with a powerful desire for sex gratification, and though offspring are the chief utility of this instinct, desire for reproduction is not normally its primary stimulus. But while the production of offspring may thus be said to be an incidental result of the sex instinct, human reproduction may be subjected to rational consideration and control, according as offspring are or are not considered desirable.

The sense of the desirability of offspring may, in the first place, be determined by social rather than individual considerations. To the group or the state a large birth-rate, a steady increase of the number of births over the number of

deaths, may be made desirable by the need of a large population for agriculture, herding, or war. In primitive tribes, superiority in numbers must have been, under conditions of competitive warfare, a pronounced asset. In any imperialistic régime, where military conquest is highly regarded, the maintenance and replenishment of large armies is a factor that has entered into reflection on the question of population.

In cases where a small ruling class is benefited by the labor of a slave or serf class, there is, at least for the ruling classes, a marked utility in the increase in population. It means just so much opportunity for increase of wealth on the part of landowning and slaveholding or serf-controlling classes. In any country, increase in the labor supply means just so much more human energy for the control of natural resources, so many more units of energy for the production of national wealth.

Offspring may come to be reflectively desired by the individual as a means of perpetuating property, family, or fame. A man cannot nonchalantly face the prospect of obliteration, and the biological fact of death may be circumvented by the equally real fact of reproduction. A man's individuality, we have already had occasion to see, is enhanced by his possessions, and if his fortune or estate is handed down he shall not altogether have been obliterated from the earth. Similarly, where a family has become a great tradition, there may be a deliberate desire on the part of an individual to have the name and tradition carried on, to keep the old lineage current and conspicuous among men. A man may think through his children to keep his own fame alive in posterity. At least his name shall be known, and if, as so often happens, a son follows in his father's profession, carries on his father's business, farm, or philanthropies, the individual attains at least some measure of vicarious immortality. His own ways, habits, traditions are carried on.

A man may, moreover, come to desire offspring for the pleasures and responsibilities of domesticity and parenthood.

There is a parental instinct as such, certainly very strong in most women, and not lacking to some degree in most men. The joys of caring for and rearing a child have too often been celebrated in literature and in life by parents both young and old to need more explicit statement here.

Restriction of population. But reproduction has been in human history promiscuous, and increase of population has been less a problem to moralists and economists than has its restriction. The danger of over-increase in population was first powerfully stated by Malthus in his *Essay on Population.* Malthus contended in effect that population always tends to increase up to the limit of subsistence, and gives indications, unless increase is checked, of increasing beyond it. In its extreme form, as it appeared in Malthus's first edition of his *Essay*, it ran somewhat as follows:

> As things are now, there is a perpetual pressure by population on the sources of food. Vice and misery cut down the number of men when they grow beyond the food. The increase of men is rapid and easy; the increase of food is in comparison, slow, and toilsome. They are to each other as a geometrical increase to an arithmetical; in North America, the population double their number in twenty years.[1]

Malthus's pessimistic prophecy of the increase of population beyond the means of subsistence has been subjected to refutation by various causes. For one thing, among civilized races at least, the birth-rate is declining. Again, intensive agriculture has vastly increased the possibilities of our natural resources. On this point, writes Kropotkin, who is better acquainted with agricultural conditions than are most social reformers:

> They [market gardeners] have created a totally new agriculture. They smile when we boast about the rotation system having permitted us to take from the field one crop every year, or four crops each three years, because their ambition is to have six and nine crops from the very same plot of land during the twelve months. They do not understand our talk about good and bad soils, because they make the soils themselves, and make it in such quantities as to be

[1] Bonar: *Philosophy and Political Economy in their Historic Relations*, p. 205.

compelled yearly to seed some of it; otherwise it would raise up the levels of their gardens by half an inch, every year. They aim at cropping, not five or six tons of grass on the acre as we do, but from fifty to one hundred tons of various vegetables on the same space; not 51 pounds worth of hay, but 100 pounds worth of vegetables of the plainest description, cabbages and carrots.[1]

Of intensive industry the same might be said. Where formerly a man could produce only enough for one man's consumption, under conditions of machine production one man's work can supply quantities sufficient for many. With a declining birth-rate and the vastly increased productivity of industry and agriculture, there is a greatly reduced danger of the population growing beyond their possible sustenance by the available food supply.

Under certain economic and social conditions there are marked variations in the birth-rate. This may be due to various causes which are, by different writers, variously assigned. The variation of the birth-rate among different classes is again a matter of common observation and statistical certainty. Higher standards of living are found regularly to be correlated with a decrease in the number of children in a family. An important factor in the voluntary restriction of population is the desire to give children that are brought into the world adequate education, environment, and social opportunity.

Cultural continuity. To the very young the world seems an unprecedented novelty. It seems scarcely older than their own memories, which are few and short, and their own experience, which is necessarily limited and confined. Through education our experience becomes immeasurably widened; we can vicariously live through the experiences of other people through hearing or reading, and can acquire the racial memory which goes back as far as the records of history, or anthropological research. As we grow older we come to learn that our civilization has a history; that our present has a past.

[1] Kropotkin: *Fields, Factories, and Workshops*, p. 74.

This past extends back through the countless æons before man walked upright. The past of human life on earth goes back itself over nearly half a million years. With this long past, the present is continuous, being as it were, additional pages in process of being written.

The physical continuity of the race is insured, as we have just seen, by a mechanism, which, though it may be subjected to rational consideration, is instinctive in its operation. The human beings that people the earth to-day are offspring of human ancestors reaching back to the appearance of the human animal in the long process of the evolution of life on earth. So far as we can see, posterity will be for countless generations physically similar to ourselves, as they certainly will, unless all records or evidences of the fact are obscured, trace their ancestry continuously back to us.

Not only is there continuity of physical descent, however, but continuity of cultural achievement. The past, in any literal temporal sense, is over and done with. The Romans are physically dead, as are the generations of barbarians of the Dark Ages, and all the inhabitants of mediæval and modern Europe, save our own contemporaries. Yesterdays are irrevocably over. The past, in any real sense, exists only in the form of achievements that have been handed down to us from previous generations. The only parts of the past that survive physically are the actual material products and achievements of bygone generations, the temples and the cathedrals, the sculptures and the manuscripts, the roads and the relics of earlier civilizations. Even these exist in the present; they are evidences, memorials, mementos of the past. These heritages from past civilizations may be interesting, intrinsically, as in the case of paintings and statues, or useful, as in the case of roads, reservoirs, or harbors.

But we inherit the past in a more vital sense. We inherit ways of thought and action, social systems, scientific and industrial methods, manners and morals, educational bequests and ideals, all that we have and are. Without these, each

generation would have to start anew. If the whole of existing society were destroyed, and a newborn generation could be miraculously preserved to maturity, its members would have to start on the same level, with the same ignorances, uncertainties, and impotences as primitive savages.

In order to make the nature and variety of our abject dependence on the past clear, we have only to consider our language, our laws, our political and social institutions, our knowledge and education, our view of this world and the next, our tastes and the means of gratifying them. On every hand the past dominates and controls us, for the most part unconsciously and without protest on our part. We are in the main its willing adherents. The imagination of the most radically-minded cannot transcend any great part of the ideas and customs transmitted to him. When once we grasp this truth, we shall, according to our mood, humbly congratulate ourselves that . . . we are permitted to stand on the giant's shoulders, and enjoy an outlook that would be quite hidden to us, if we had to trust to our own short legs; or we may resentfully chafe at our bonds and, like Prometheus, vainly strive to wrest ourselves from the rock of the past, in our eagerness to bring relief to the suffering children of men.

In any case, whether we bless or curse the past, we are inevitably its offspring, and it makes us its own long before we realize it. It is, indeed, almost all that we can have.[1]

The cultural achievements of the past, which we inherit chiefly as social habits, are obviously not transmitted to us physically, as are the original human traits with which this volume has so far been chiefly concerned. They are not in our blood; they are acquired like other habits, through contact with others and through repeated practice.

We are thus to a very large extent conditioned by the past. It is as if we had inherited a fortune composed of various kinds of properties, houses, books, automobiles, warehouses, musical instruments, and in addition, trade concessions, business secrets, formulæs, methods, and good-will. Our activities will be limited in measure by the extent of the property, its constituent items, and the repair in which we keep it. We may squander or misinvest our principal, as when we use scientific

[1] Robinson: *The New History*, pp. 256–57.

knowledge for dangerous or dubious aims, for example, for conquest or rapine. We may add to it, as in the development of the sciences and industrial arts. We may, so to speak, live on the income. Such is the case when a society ceases to be progressive, and fails to add anything to a highly developed traditional culture, as happened strikingly in the case of China. Again we may have inherited "white elephants," which may be of absolutely no use to us, encumbrances of which we cannot easily rid ourselves, influential ideas which are no longer adequate to our present situation, obsolete emotions, methods, or institutions. We may allow our cultural inheritance, through bad education, to fall into disrepair and decay.

Since we are so dependent on the past, our attitude toward it, which in turn determines the use we make of it, is of the most crucial significance. The several characteristic and varying attitudes toward the past which are so markedly current are not determined solely by logical considerations. For individuals and social groups particular features of their heritage have great emotional associations. The living past is composed of habits, traditions, values, which are vivid and vital issues to those who practice them. Traditions, customs, or social methods come to have intrinsic values; they become the center of deep attachments and strong passion. They are a rich element of the atmosphere of the present; they are woven into the intimate fabric of our lives. The awe which we feel in great cathedrals is historical as well as religious. Those vast solemn arches are the voices of the past speaking to us. The moral appeal of tradition appears with beautiful clarity in the opening chapter of Pater's *Marius the Epicurean.*

> A sense of conscious powers external to ourselves, pleased or displeased by the right or wrong conduct of every circumstance of daily life — that *conscience,* of which the old Roman religion was a formal, habitual recognition, had become in him a powerful current of feeling and observance. The old-fashioned, partly Puritanic awe, the power of which Wordsworth noted and valued so highly in a northern

peasantry, had its counterpart in the feeling of the Roman lad, a she passed the spot, "touched of heaven," where the lightning had struck dead an aged laborer in the field: an upright stone, still with moldering garlands about it, marked the place. He brought to that system of symbolic usages, and they in turn developed in him further, a great seriousness, an impressibility to the sacredness of time, of life and its events, and the circumstances of family fellowship — of such gifts to men as fire, water, the earth from labor on which they live, really understood by him as gifts — a sense of religious responsibility in the reception of them. It was a religion for the most part of fear, of multitudinous scruples, of a year-long burden of forms.[1]

To the past, as it is made familiar to us through song, study, and traditional practice, we may experience a piety amounting almost to religious devotion. In some individuals and in some nations, this sense for tradition is very strong.

Every one has felt more or less keenly this sense of being a link in a great tradition, whether of a college, family, or country. Sometimes this sense for tradition takes an æsthetic form, as in the case of ritual, whether social or religious. Old streets, ivied towers, ancient rooms, become symbols of great and dignified achievements; ceremonies come to be invested with a serious beauty and memorable charm. They become reminders of a "torch to be carried on," of a spirit to be cherished and kept alive, of a history to be carried on or a purpose or an ideal to be fulfilled. As we shall see in a moment, this sense for the past, which, as Santayana says, makes a man loyal to the sources of his being, has both its virtues and vices. It is of immense value in preserving continuity and cultural integration, in keeping many men continuously moving toward a single fixed end. It may also wrap dangerously irrelevant habits and institutions in a saving — and illusive — halo.

There are, on the other hand, individuals with very little sense for tradition. This may be accounted for in some cases by a marked æsthetic insensibility, which sees in ritual, ceremony, or habit, merely the literal, without any appreciation

[1] Walter Pater: *Marius the Epicurean* (A. L. Burt edition), pp. 3–4.

at all of its symbolic significance.[1] In other cases, individuals are unsusceptible and hostile to tradition, because they have themselves been socially disinherited. This is illustrated not infrequently in the case of foreigners who, for one reason or another, have left and lost interest in their native land, and become men without a country.

There are others by temperament rebellious and iconoclastic, who combine a keen sense of present difficulties and problems with small reverence, use for, or interest in the past, and small imaginative sympathy with it. The past is to them a "sea of errors." They regard all past achievements as bad scribblings which must be erased, so that we may start with a clean slate. There have been included among such, great historical reformers. Bentham's enthusiasm for progress led him into most intemperate attacks on history and historical method. The most noted of the eighteenth-century philosophers saw nothing but evil in tradition. Such sentiments were echoed in the early nineteenth century by Shelley, Godwin, and their circle, as expressed, for example, in Shelley's "Hellas":

> "The world's great age begins anew,
> The golden years return,
> The earth doth like a snake renew
> Her winter weeds outworn;
> Heaven smiles, and faiths and empires gleam,
> Like wrecks of a dissolving dream.
>
> . . . . . .
>
> "Another Athens shall arise,
> And to remoter time
> Bequeath, like sunset to the skies,
> The splendor of its prime;
> And leave, if nought so bright can live,
> All earth can take or Heaven can give."

It is not surprising that men with an eye fixed on the future

[1] This is illustrated by the crass excesses of certain radical satirists of religious forms. Those who are the enemies of religion for economic, social, or intellectualistic reasons combine a singular sense of the literal absurdities of religious forms with a marked insensibility to their symbolic values. One may find interesting examples, from Voltaire to Robert Ingersoll.

should develop a contempt or an obliviousness of the past. Utopians nearly always start with "a world various and beautiful and new."

Perhaps the chief ingredient in such discounting of all past history is the rebel temperament which wants to break away from what it regards as the chains, the dead weight, the ruts of tradition. It cheerfully says, "Nous changerons tout cela," and does not stop to discriminate between the *roads* and the *ruts* that have been made by people in the past.

These two temperaments,[1] play a large part in determining attitudes toward the past. The one regards with awe and reverence past achievement, and rests his faith on the experiments which have been tested and proved by time. The other, to state the position extremely, regards each day as the possible glorious dawn of a completely new world. The first attitude, when intemperately preached and practiced, becomes an uncritical veneration of the past; the second, an uncritical disparagement. We shall briefly examine each.

Uncritical veneration of the past. The extreme form of uncritical veneration of the past may be said to take the position that old things are good simply because they are *old;* new things are evil simply because they are *new.* Institutions, Ideas, Customs are, like wines, supposed to attain quality with age. A custom, a law, a code of morals is defined or maintained on the ground of its ancient — and honorable — history, of the great span of years during which it has been current, of the generation after generation that has lived under its auspices. The ways of our fathers, the old time-tested ways, these, we are told, must be our ways.

The psychological origins of this position have in part been discussed. There is in some individuals a highly developed

[1] One is reminded of the song of the sentry before the House of Parliament in Gilbert and Sullivan's "Iolanthe":

"'T is strange how Nature doth contrive
That every little boy or gal,
That's born into the world alive,
Is either a little Liberal,
Or else a little Conservative!"

sentiment and reverence for tradition as such, and an æsthetic sensibility to the mellowness, ripeness, and charm that so often accompany old things.[1] The new seems, as it often is, loud, brassy, vulgar, and hard. But there are other and equally important causes. Men trust and cherish the familiar in ideas, customs, and social organization, just as they trust and cherish old friends. They know what to expect from them; they have their well-noted excellences, and, while they have their defects, these also are definitely known and can be definitely reckoned with. The old order may not be perfect, but it is an order, and an order whose outlines and possibilities are known and predictable. Change means change to the unaccustomed and the unfamiliar. And the unaccustomed and the unfamiliar, as already pointed out, normally arouse fear. One of the conventional phrases (which has become conventional because it is accurate) with which changes have been greeted is the *cliché*, "we view with alarm." No small part of genuine opposition to change comes from the cautious and conscientious types of mind which will not sanction the reckless taking of chances, especially where the interests of large groups are concerned, which want to know precisely where a change will lead. Such a mind holds off from committing society to making changes that will put a situation beyond control and lead to unforeseen and uncontrollable dangers. Especially is this felt by the administrator, by the man who has experience with the difficulties of putting ideas in practice, who knows how vastly more difficult it is to operate with people than with paper.[2] The man of affairs knows

[1] "Oxford," said a distinguished visitor to this venerable institution, "looks just as it ought to look." And one is reminded of the story of the American lady who, admiring the smooth lawns at Oxford, asked a gardener how they managed to give them that velvet gloss. "We roll them, madam," he said, "for eight hundred years."

[2] Thus writes Catharine II, in a letter to Diderot, the French philosopher and humanitarian: "M. Diderot, in all your schemes of reform, you entirely forget the difference in our position; you work only on paper, which endures all things; it offers no obstacle, either to your pen or your imagination. But I, poor Empress that I am, work on a far more delicate and irritable substance, the human skin."

how easy it is to check and change ideas in one's mind, but knows also the uncontrollable momentum of ideas when they are acted upon by vast numbers of men.

Again, the maintenance of ways that have been practiced in the past has a large hold over people, for reasons already discussed in the chapter on Habit. The old and the accustomed are comfortable and facile; change means inconvenience and frustration of habitual desires. This is in part the explanation of the increasing conservatism of men as they grow older. Not only do they have a keener sense of the difficulty of introducing changes, but their own fixed habits of mind and emotion make part of the difficulty. They like the old ways and persist in them just as they like and keep old books, old friends, and old shoes.

Romantic idealization of the past. Reverence for the past may also be due to a romantic idealization of it. In such cases, it is not an interest in maintaining the present order; it is rather a contempt for the present and wistful yearning for the "good old days." Every one indulges more or less in such idealization. Such halos are made possible because we retain the pleasant rather than the painful and dreary aspects of our past experience. The college alumnus returning to the campus tells of the since unsurpassed intellectual and athletic feats of the freshman class of which he was a member. The elderly gentleman sighs over his newspaper at the bad ways into which the world is degenerating, and yearns for the old days when the plays were better, conversation more interesting, houses more comfortable, and men more loyal. In similar trivial instances we are all inclined to indulge in such mythology. The universality and age of this tendency has been well described by a student of Greek civilization.

> This is the belief of the old school of every age — there was once a "good" time; and it matters not at all in the study of moral ideals that no such time can be shown to have existed. The men of the fourth century [B.C.] say that it was in the fifth; those of the fifth

say it was in the sixth; and so on infinitely. The same ideal was at work when William Morris looked to the thirteenth century, forgetting that Dante looked to a still earlier period; and both forgot that the men of that earlier period said the same — "not now, indeed, but before us men were happy." So simpler men incline to say that their grandfathers were fine fellows, but the "old college is going to the dogs," or "the House of Commons is not what it was once," for reverence and faith and manliness once ruled the world. The old school lives upon an ignorance of history; it is genuinely moved by a simple moral ideal of life and character which its own imagination has created. And when evil becomes obvious, it is the new-fangled notions that are to blame. "Trying new dodges" has brought Athens down in the world — as Aristophanes in 393 B.C. makes his protagonist say:

> "And would it not have saved the Athenian state,
> If she kept to what was good, and did not try
> Always some new plan?" [1]

On a large scale the romantic idealization of the past has been made into a philosophy of history. The "golden age," instead of being put in a roseate and remote future, is put in an equally remote and roseate past. The Greek legends were fond of a golden age when the gods moved among men. The Garden of Eden is the Christian apotheosis of the world's perfections. Various philosophers have pointed out the fallacy of finding such a mythological locus for our ideals, and evolution and the general revelations of history have indicated the completely mythical character of the golden age. History may, in general, be said to reveal that, whatever the imperfections of our own age, we have immeasurably improved in many pronounced respects over conditions earlier than our own. The idealized picture of the Middle Ages with its guardsmen and its courtly knights and ladies, is coming, with increasing historical information, to seem insignificant and untrue in comparison with the unspeakable hardships of the mass of men, the evil social and sanitary conditions, the plagues and pestilences which were as much a part of it. The picture of the ideally gentle and benevolent attitude of the

[1] C. Delisle Burns: *Greek Ideals*, pp. 118–19.

master to his slaves is by no means regarded as a typical picture of conditions of slave labor in the South. We know, positively, on the other hand, that our medicine and surgery, our scientific and industrial methods, our production and our resources are incomparably greater than those of any earlier period in history, as are the possibilities of the control of Nature still unrealized.

If there were time I might try to show that progress in knowledge and its application to the alleviation of man's estate is more rapid now than ever before. But this scarcely needs formal proof; it is so obvious. A few years ago an eminent French *littérateur*, Brunetière, declared science bankrupt. This was on the eve of the discoveries in radio-activity which have opened up great vistas of possible human readjustments if we could but learn to control and utilize the inexhaustible sources of power that lie in the atom. It was on the eve of the discovery of the function of the white blood corpuscles, which clears the way for indefinite advance in medicine. Only a poor discouraged man of letters could think for a moment that science was bankrupt. No one entitled to an opinion on the subject believes that we have made more than a beginning in penetrating the secrets of the organic and inorganic worlds.[1]

Even in the face of these facts, reverence for the past may amount to such religious veneration that change may come literally to be regarded as sacrilegious. In primitive tribes the reasons for this insistence are clear. Rites and rituals are used to secure the favor of the gods and any departure from traditional customs is looked upon as fraught with actual danger. But the past, as it lives in established forms and practices, is still by many, and in highly advanced societies, almost religiously cherished, sustained, and perpetuated. Every college, religion, and country has its traditional forms of life and practice, any infringement of which is regarded with the gravest disapproval.[2] In social life, generally, there are fixed forms for given occasions, forms of address, greeting, conversation, and clothes, all that commonly goes under the name of

[1] Robinson: *The New History*, p. 262.

[2] It has been said that a custom repeated on a college campus two years in succession constitutes a tradition.

the "conventions" or "proprieties." In law, as is well known, there is developed sometimes to an almost absurd degree a ritual of procedure. In religion, traditional values become embodied in fixed rituals of music, processional, and prayer. In education, especially higher education, there has developed a fairly stable tradition in the granting of degrees, the elements of a curriculum, the forms of examination, and the like. To certain types of mind, fixed forms in all these fields have come to be regarded as of intrinsic importance. Love of "good form," the classicist point of view at its best, may develop into sheer pedantry and Pharisaism, an insistence on the fixed form when the intent is changed or forgotten, a regard for the letter rather than the spirit of the law. In a large number of cases, the fixed modes of life and practice which are our inheritance come to be regarded as symbols of eternal and changeless values. Thus many highly intelligent men find ritual in religion and traditional customs in education or in social life freighted with symbolic significance, and any infringement of them as almost sacrilegious in character.

Change synonymous with evil. Change, again, may be discouraged by those who hold, with more or less sincerity, that no good can come of it. Such a position may, and frequently is, maintained by those in whom fortunate accident of birth, favored social position, exuberant optimism, or a stanch and resilient faith, induces the belief that the social order and social practices, education, law, customs, economic conditions, science, art, *et al.*, are completely satisfactory. Like Pippa, in Browning's poem, they are satisfied that "God's in His Heaven; all's right with the world." That there are no imperfections, in manners, politics, or morals, in our present social order, that there are no improvements which good-will, energy, and intelligence can effect, few will maintain without qualification. To do so implies, when sincere, extraordinary blindness to the facts, for example, of poverty and disease, which, though they do not happen to touch a particular individual, are patent and ubiquitous

enough. In the face of undeniable evils the position that the ways we have inherited are completely adequate to our contemporary problems cannot be ingenuously maintained.

The position more generally expounded by the opponents of change is that our present modes of life give us the best possible results, considering the limitations of nature and human nature, and that the customs, institutions, and ideas we now have are the fruits of a ripe, a mellow, and a time-tested wisdom, that any radical innovations would, on the whole, put us in a worse position than that in which we find ourselves. Persons taking this attitude discount every suggested improvement on the ground that, even though intrinsically good, it will bring a host of inevitable evils with it, and that, all things considered, we had better leave well enough alone. Some extreme exponents of this doctrine maintain, as did some of the Hebrew prophets, that whatever evils are ours are our own fault, that fault consisting in a lapse from the accustomed ancient ways. To continue without abatement the established ways is the surest road to happiness. Education, social customs, political organization, these are sound and wholesome as they are; and modification means interference with the works and processes of reason.

> "All Nature is but art, unknown to thee;
> All chance, direction, which thou canst not see;
> All discord, harmony not understood;
> All partial evil, universal good;
> And spite of pride, in erring reason's spite,
> One truth is clear, Whatever is, is right." [1]

Later Hegel developed an elaborate philosophy of history in which he tried to demonstrate that the history of the past was one long exemplification of reason; that each event that happened was part of the great cosmic scheme, an indispensable syllable of the Divine Idea as it moved through history; each action part of the increasing purpose that runs through the ages. That these contentions are, to say the least, ex-

[1] Pope: *Essay on Man*, epistle I, lines 289 ff.

treme, will appear presently in the statement of the opposite position which sees nothing in the past but a long succession of blunders, evils, and stupidities.

"Order" *versus* change. Finally, genuine opposition to change arises from those who fear the instability which it implies. Continuation in established ways makes for integration, discipline, and stability. It makes possible the converging of means toward an end, it cumulates efforts resulting in definite achievement. In so far as we do accomplish anything of significance, we must move along stable and determinate lines; we must be able to count on the future.[1] It has already been pointed out that it is man's docility to learning, his long period of infancy [2] which makes his eventual achievements possible. But it is man's persistence in the habits he has acquired that is in part responsible for his progress. In individual life, the utility of persistence, and concentration of effort upon a definite piece of work, have been sufficiently stressed by moralists, both popular and professional. "A rolling stone gathers no moss," is as true psychologically as it is physically. Any outstanding accomplishment, whether in business, scholarship, science, or literature, demands perseverance in definite courses of action. We are inclined, and usually with reason, to suspect the effectiveness of a man who has half a dozen professions in half as many years. Such vacillations produce whimsical and scattered movements; but they are fruitless in results; they literally "get nowhere."

Just as, in the case of individuals, any significant achievements require persistent convergence of means toward a definite end, so is it in the case of social groups. No great business organizations are built up through continual variations of policy. Similarly, in the building up of a university, a government department, a state, or a social order, consecutive and disciplined persistence in established ways is a requisite of progress. Without such continuous organization of efforts

[1] The uncertainty that business men feel during a presidential campaign is an illustration.

[2] See *ante*, p. 10.

toward fixed goals, action becomes frivolous and fragmentary, a wind along a waste. The history of the English people has elicited the admiration of philosophers and historians because it has been such a gradual and deliberate movement, such a measured and certain progress toward political and social freedom. To those who appreciate the value of unity of action, of the assured fruits of cumulative and consistent action along a given path, change as such seems fraught with danger. Nor is it specific dangers they fear so much as the loss of moral fiber, the scattering of energies, the waste and futility that are frequently the net result of casual driftings with every wind that blows. No one has more eloquently expressed this view than Edmund Burke in his *Reflections on the French Revolution:*

> But one of the first and most leading principles on which the commonwealth and the laws are consecrated, is lest the temporary possessors and life-renters in it, unmindful of what they have received from their ancestors, or of what is due to their posterity, should act as if they were the entire masters; that they should think it among their rights to cut off the entail, or commit waste on the inheritance, by destroying at their pleasure the whole original fabric of their society; hazarding to leave to those who come after them a ruin instead of a habitation — and teaching these successors as little to respect their contrivances, as they had themselves respected the institutions of their forefathers. By this unprincipled facility of changing the state as often, and as much, and in as many ways, as there are floating fancies or fashions, the whole chain and continuity of the commonwealth would be broken. No one generation could link with the other. Men would be little better than the flies of a summer.
>
> . . . . . .
>
> To avoid, therefore, the evils of inconstancy and versatility, ten thousand times worse than those of obstinacy and the blindest prejudice, we have consecrated the state, that no man should approach to look into its defects or corruptions, but with due caution; that he should never dream of beginning its reformation by its subversion; that he should approach to the faults of the state as to the wounds of a father, with pious awe and trembling solicitude.[1]

[1] Edmund Burke: *Reflections on the French Revolution* (George Bell & Sons, 1888), pp. 366-68.

Personal or class opposition to change. Sincere fear of the possible evils of novelty in the disorganization which it promotes, habituation to established ways, or a sentimental and æsthetic allegiance to them — all these are factors that determine genuine opposition to change. But aversion to change may be generalized into a philosophical attitude by those who have special personal or class reasons for disliking specific changes. The hand-workers in the early nineteenth century stoned the machinists and machines which threw them out of employment. Every change does discommode some class or classes of persons, and part of the opposition to specific changes comes from those whom they would adversely affect. It is not surprising that liquor interests should be opposed to prohibition, that theatrical managers should have protested against a tax on the theater, or those with great incomes against an excess profits tax. Selfish opposition to specific changes is, indeed, frequently veiled in the disguise of plausible reasons for opposition to change in general. Those who fear the results to their own personal or class interests of some of the radical social legislation of our own day may disguise those more or less consciously realized motives under the form of impartial philosophical opposition to social change in general. They may find philosophical justification for maintaining unmodified an established order which redounds to their own advantage.

Uncritical disparagement. The other extreme is represented by the position that old things are bad because they are *old*, and new things good because they are *new*. This is illustrated in an extreme though trivial form by faddists of every kind. There are people who chiefly pride themselves on being up-to-the-minute, and exhibit an almost pathological fear of being behind the times. This thirst for the novel is seen on various levels, from those who wear the newest styles, and dine at the newest hotels, to those who make a point of reading only the newest books, hearing only the newest music, and discussing the latest theories. For such temperaments,

and more or less to most people, there is an intrinsic glamour about the word "new." The physical qualities that are so often associated with newness are carried over into social and intellectual matters, where they do not so completely apply. The new is bright and unfrayed; it has not yet suffered senility and decay. The new is smart and striking; it catches the eye and the attention. Just as old things are dog-eared, worn, and tattered, so are old institutions, habits, and ideas. Just as we want the newest books and phonographs, the latest conveniences in housing and sanitation, so we want the latest modernities in political, social, and intellectual matters. Especially about new ideas, there is the freshness and infinite possibility of youth; every new idea is as yet an unbroken promise. It has not been subjected to the frustrations, disillusions, and compromises to which all theory is subjected in the world of action.[1] Every new idea is an experiment, a possibility, a hope. It may be the long-awaited miracle; it may be the prayed-for solution of all our difficulties.

This susceptibility to the novel is peculiarly displayed by those who see nothing but evil in the old. Against the outworn past with its disillusions, its errors, its evils, and its hypocrisies, the new shines out in glorious contrast. There are persons who combine a very genuine sense of present evils with a resilient belief in the possibilities of change. The classic instance of this is seen in the Messianic idea. Even in the worst of times, the pious Jew could count on the saving appearance of the Messiah. Every Utopian is as sure of the salvation promised by his prize solution as he is of the evils which it is intended to rectify. The ardent Socialist may

[1] "Real life is, to most men, a long second-best, a perpetual compromise between the ideal and the possible; but the world of pure reason knows no compromise, no practical limitations, no barrier to the creative activity embodying in splendid edifices the passionate aspiration after the perfect from which all great work springs. Remote from human passions, remote even from the pitiful facts of nature, the generations have gradually created an ordered cosmos, where pure thought can dwell as in its natural home, and where one, at least, of our nobler impulses can escape from the dreary exile of the actual world." (Bertrand Russell: *Mysticism and Logic*, pp. 60–61.)

equally divide his energies between pointing out the evils of the capitalist system, and the certain bliss of his Socialist republic. The past is nothing but a festering mass of evils; industry is nothing but slavery, religion nothing but superstition, education nothing but dead traditional formalism, social life nothing but hypocrisy.

Where the past is so darkly conceived, there comes an uncritical welcoming of anything new, anything that will take men away from it. Nothing could be worse than the present or past; anything as yet untried may be better. As Karl Marx told the working classes: "The proletarians have nothing to lose but their chains. They have a world to win."

The past is, by its ruthless critics, conceived not infrequently as enchaining or enslaving. Particularly, the radical insists, are men enslaved by habits of thought, feeling, and action which are totally inadequate to our present problems and difficulties. War-like emotions, he points out, may have been useful in an earlier civilization, but are now a total disutility. Belief in magic may have been an asset to primitive man in his ignorance; it is not to modern man with his science. The institution of private property may have had its values in building up civilization; its utility is over. We still make stereotyped and archaic reactions where the situation has utterly changed. The institutions, ideas, and habits of the past are at once so compelling and so obsolete that we must make a clear break with the past; we must start with a clean slate. To continue, so we are told, is merely going further and further along the wrong paths; it is like continuing with a broken engine, or without a rudder.

Critical examination of the past. That both positions just discussed are extreme, goes without saying. The past is neither all good nor all bad; it has achieved as well as it has erred. But it is, in any case, all we have. Without the knowledge, the customs, the institutions we have inherited, we should have no advantage at all over our ancestors of ten thousand years ago. Biologically we have not changed. The

past is our basic material. Each generation starts with what it finds in the way of cultural achievement, and builds upon that.

> Antiquity deserveth that reverence, that men should take a stand thereupon, and discover what is the best way; but when the discovery is well-taken, then to make progression. And to speak truly, *antiquitas sæculi iuventus mundi*. These times are the ancient times, when the world is ancient, and not those which we account ancient *ordine retrogrado*, by a computation backwards from ourselves.[1]

The past, save what we discover in our generation, is our sole storehouse of materials. And a very small part of our useful knowledge in the industrial arts, in science, in social organization and administration does come from our own generation. It is the accumulated experience of generations of men. We can, out of this mass of materials, select whatever is useful in clarifying the issues of the present, whatever helps us to accomplish those purposes which we have, after critical consideration, decided to be useful and serviceable. If, for example, we decide to build a bridge, it is of importance that we know all that men have in the past discovered of mechanical relations and industrial art which will enable us to build a bridge well. If we want to establish an educational system in some backward portion of the world, it is useful for us to know what methods men have used in similar situations. Whatever we decide to do, we are so much the better off, if we know all that men before us have learned in analogous instances.

But to use the inheritance of the past implies an analysis of present problems, and an acceptance of the course to be pursued. The experience of the past, the heritage of knowledge that has come down to us, is so various and extensive that choices must be made. The historian in writing even a comprehensive history of a country must still make choices and omissions. Similarly, in using knowledge inherited from the past as materials, we must have specific problems to

[1] Bacon: *The Advancement of Learning*, Collected Works, vol. 1, p. 172.

govern our choice. The statistician could collect innumerable statistics; he collects only those which have a bearing on his subject. The lawyer searches out that part of the legal tradition which is applicable to his own case. Without some lead or clue we should lose ourselves in the multifariousness of transmitted knowledge at our disposal.

To use the past as an instrument for furthering present purposes implies neither veneration nor disparagement of it. We neither condemn nor praise the past as a whole; we regard specific institutions, customs, or ideas, as adequate or inadequate, as serviceable or disserviceable. In general, it may be said that the value of any still extant part of the past, be it a work of art, a habit, a tradition, has very little to do with its origin. The instinct of eating is still useful though it has a long history. The works of the Old Masters are not really great because they are old, nor are the works of contemporaries either good or bad because they are new. Man himself is to be estimated no differently, whether he is descended from the angels or the apes.

> If we would appreciate our own morals and religion we are often advised to consider primitive man and his institutions. If we would evaluate marriage or property, we are often directed to study our remote ancestors. . . . Such considerations as these have diverse effects according to our temperaments. They quite uniformly produce, however, disillusionment and sophistication. . . . This exaltation of the past, as the ancestral home of all that we are, may make us regret our loss of illusions and our disconcerting enlightenment. . . . We may break with the past, scorn an inheritance so redolent of blood and lust and superstition, revel in an emancipation unguided by the discipline of centuries, strive to create a new world every day, and imagine that, at last, we have begun to make progress.[1]

The standards of value of the things we have or do or say, the approvals or disapprovals we should logically accord them, are determined not by their history, not by their past, but by their uses in the living present in which we live. An institution may have served the purposes of a bygone generation; it

[1] Woodbridge: *The Purpose of History*, p. 72.

does not follow that it thereby serves our own. The reverse may similarly be true. For us the specific features of our social inheritance depend upon the ends or purposes which we reflectively decide upon and accept. Whether capital punishment is good or evil; whether private property is an adequate or inadequate institution for social welfare; whether marriage is a perfect or an imperfect institution; whether collective bargaining, competitive industry, old age insurance, income taxes, nationalization of railroads are useful or pernicious depends neither on their age nor their novelty. Their value is determined by their relevancy to our own ideals, by the extent to which they hinder or promote the results which we consciously desire.

The past may be studied with a view to clarifying present issues. In the first place, we may study past successes and failures in order to guide our actions in present similar situations. A man setting out to organize and administer a newspaper will benefit by the experiences others have had in the same situation. In the same way, we can learn from past history something, at least, bearing on present political and social issues. It is true enough that history has been much misused for the drawing of lessons and guidance. As Professor Robinson says:

> To-day, however, one rarely finds a historical student who would venture to recommend statesmen, warriors, and moralists to place any confidence whatsoever in historical analogies and warnings, for the supposed analogies usually prove illusive on inspection, and the warnings impertinent. Whether or no Napoleon was ever able in his own campaigns to make any practical use of the accounts he had read of those of Alexander and Cæsar, it is quite certain that Admiral Togo would have derived no useful hints from Nelson's tactics at Alexandria or Trafalgar. Our situation is so novel that it would seem as if political and military precedents of even a century ago could have no possible value. As for our present "anxious morality," as Maeterlinck calls it, it seems equally clear that the sinful extravagances of Sardanapalus and Nero, and the conspicuous public virtue of Aristides and the Horatii, are alike impotent to promote it.[1]

[1] Robinson: *The New History*, p. 36.

But situations are, within limits, duplicated in historical processes, and it is illuminating at least to see wherein men failed and wherein they succeeded in the things they set themselves to do. The history of labor legislation certainly testifies to the effectiveness of "collective bargaining" in securing improved labor conditions, as the history of strikes does also to the public loss and injury incident to this kind of industrial warfare. If compulsory arbitration has been a successful method of dealing with labor difficulties in Australia in the past, we can, by a careful study and comparison of conditions there and conditions current in our country at the present, illuminate and clarify our own problems. A campaign manager in one presidential campaign does not forget what was effective in the last, nor does he hesitate to profit by his mistakes or those of others.

An impartial survey of the heritage of the past undertakes critically to examine institutions, customs, ideas still current with a view to determining their relevancy and utility to our present needs. This demands, on the one hand, clarity as to what those needs are, and, on the other hand, freedom from prejudice for or against existing modes of life simply because they have a history. A critical examination of the past amounts practically to a taking stock, a summary of our social assets and liabilities. We shall find our ideas, for example, and our customs, a strange mixture of useful preservations, and absurd or positively harmful relics of the past. Ideas which were natural and useful enough in the situation in which they originated, live on into a totally changed situation, along with other ideas, like that of gravitation, which are as true and as useful now as when they were first enunciated. Many customs and institutions which may be found to have as great utility now as when they were first practiced generations ago, the customs and institutions, let us say, of family life, may be found persisting along with customs and institutions, like excess legal formalism (or, as their opponents claim, a bi-cameral legislative system or a two-party system) which

may come generally to be regarded as impediments to progress.[1] The unprejudiced observer, scientifically interested in preserving those forms and mechanisms of social life which are of genuine service to his own generation, will not condemn or applaud "the past" *en masse*. He will, rather, examine it in specific detail. He will not, for example, dismiss classical education, because it is classical or old. He will rather try experimentally to determine the actual consequences in the case of those who study the classics. He will examine the claims made for the study, try in specific cases to find out whether those claims are fulfilled, and condemn or approve the study, say, of Latin and Greek, according to his estimate of the desirability or undesirability of those consequences. If he finds, for example, that the study of Latin does promote general literary appreciation, his decision that it should or should not be continued will depend on his opinion of the value of general literary appreciation as compared with other values in an industrial civilization. Similarly, with "freedom of contract," "freedom of the seas," military service, bi-cameral systems, party caucuses, presidential veto, and all the other political and social heritages of the past.

But a man who impartially examines the past will usually exhibit also an appreciation of its attainments and a sense of the present good to which it has been instrumental. He will not glibly dismiss institutions, habits, methods of life that are the slow accumulations of centuries. He will have a sense of the continuous efforts and energies that have gone into the making of contemporary civilization. He will have, in suggesting ruthless innovations, a sobering sense of the gradual evolution that has made present institutions, habits, ideas, what they are.

The student of the past knows, moreover, that the present without its background of history is literally meaningless.

[1] The situation in the case of outworn social institutions is paralleled in the case of the human appendix, once possessing a function in the digestive system of primitive man, but now useless and likely on occasion to become a positive disutility.

In the words of a well-known student of the development of human culture:

> Progress, degradation, survival, modification, are all modes of the connection that binds together the complex network of civilization. It needs but a glance into the trivial details of our own daily life to set us thinking how far we are really its originators, and how far but the transmitters and modifiers of the results of long past ages Looking round the rooms we live in, we may try here how far he who knows only his own time can be capable of rightly comprehending even that. Here is the honeysuckle of Assyria, there the fleur-de-lis of Anjou, a cornice with a Greek border runs round the ceiling, the style of Louis XIV and its parent the Renaissance share the looking glass between them. Transformed, shifted or mutilated, such elements of art still carry their history plainly stamped upon them. . . . It is thus even with the fashion of the clothes men wear. The ridiculous little tails of the German postilion's coat show of themselves how they came to dwindle to such absurd rudiments; but the English clergyman's bands no longer so convey their history to the eye, and look unaccountable enough till one has seen the intermediate stages through which they came down from the more serviceable wide collars, such as Milton wears in his portrait, and which gave their name to the "band-box" they used to be kept in. In fact, the books of costume showing how one garment grew or shrank by gradual stages and passed into another, illustrate with much force and clearness the nature of the change and growth, revival and decay, which go on from year to year in more important matters of life. In books, again, we see each writer not for and by himself, but occupying his proper place in history; we look through each philosopher, mathematician, chemist, poet, into the background of his education — through Leibnitz into Descartes, through Dalton into Priestly, through Milton into Homer.[1]

Besides understanding the present better in terms of its history, there is much in the heritage of the past, especially of its finished products, that the citizen of contemporary civilization will wish preserved for its own sake. The works of art, of music, and of literature which are handed down to us are "possessions forever." Whatever be the limitations of our social inheritance, as instruments for the solution of our difficulties, those finished products which constitute the "best

[1] Tylor, Edward B.: *Primitive Culture*, vol. I, pp. 17 ff.

that has been known and thought" in the world are beyond cavil. They may not solve our problems, but they immensely enrich and broaden our lives. They are enjoyed because they are intrinsically beautiful, but also because they widen men's sympathies and broaden the scope of contemporary purposes and ideals.

> The culture that this transmission of racial experience makes possible, can be made perfect by the critical spirit alone, and, indeed, may be said to be one with it. For who is the true critic but he who bears within himself the dreams and ideas and feelings of myriad generations, and to whom no form of thought is alien, no emotional impulse obscure. And who is the true man of culture, if not he in whom fine scholarship and fastidious rejection . . . develops that spirit of disinterested curiosity which is the real spirit, as it is the real fruit of the intellectual life, and thus attains to intellectual clarity; and having learned the best that is known and thought in the world, lives — it is not fanciful to say so — among the Immortals.[1]

The student of Greek life knows that the Greeks in their view of Nature and of morals, in their conception of the way life should be lived, in their discrimination of the beautiful, have still much to teach us. He knows, however much we may have outlived the hierarchy of obedience which constitutes mediæval social and political life, we should do well to recover the humility in living, the craftsmanship in industry, and precision in thinking which constituted so conspicuous features of mediæval civilization. He knows that progress is not altogether measured by flying machines and wireless telegraphy. He is aware that speed and quantity, the key values in an industrial civilization, are not the only values that ever have been, or ever should be cherished by mankind.

Limitations of the past. Along with a sensitive appreciation of the achievements and values of the past, goes, in the impartial critic, an acknowledgment of its limitations. We can appreciate the distinctive contributions of Greek culture without setting up Greek life as an ultimate ideal. We know that with all the beauty attained and expressed in

[1] Oscar Wilde: *Intentions*, pp. 192–93.

their art and, to a certain extent, in their civilization, the Athenians yet sacrificed the majority to a life of slavery in order that the minority might lead a life of the spirit, that their religion had its notable crudities and cruelties, that their science was trivial, and their control of Nature negligible. In the words of one of their most thoroughgoing admirers:

> The harmony of the Greeks contained in itself the factors of its own destruction. And in spite of the fascination which constantly fixes our gaze on that fairest and happiest halting place in the secular march of man, it was not there, any more than here, that he was destined to find an ultimate reconciliation and repose.[1]

Again, we know the many beautiful features of mediæval life through its painting and poetry and religion. We know Saint Francis and are familiar with the heroic records of saintliness and renunciation. We know the great cathedrals, the pageantry and splendor, the exquisite handicraft, the tapestries and illuminated manuscripts, the vast learning and the incomparable dialectic. We know also the social injustices, the misery and squalor. the ignorance in which the mass of the people lived.

We can stop, therefore, neither in perpetual adoration of nor perpetual caviling at the past. Each age had its special excellences and its special defects, both from the point of view of the ideals then current, and those current in our own day. In so far as the past is dead and over with, we cannot legitimately criticize it with standards of our own day. We cannot blame the Greeks for sanctioning slavery, nor criticize James I because he was not a thoroughgoing democrat. But in so far as the past still lives, it is open to critical examination and revision. Traditions, customs, ideas, and institutions inherited from the past, which still control us, are subject to modification. We are justified in welcoming changes and modifications which, after careful inquiry, seem clearly to promise betterment in the life of the group. Thus to welcome

[1] G. Lowes Dickinson: *Greek View of Life*, p. 248.

changes which upon experimental evidence show clearly the benefits that will accrue to the group, is not radicalism. Nor is opposition to changes on the ground that upon critical examination they give promise of harmful consequences, conservatism. Verdicts for or against change reached on such a basis reflect the spirit and technique of experimental science. They reflect the desire to settle a course of action on the basis of its results in practice rather than on any preconceived prejudices in favor either of stability or change. To the critical mind, neither stability nor change is an end in itself. There is no hypnotism about "things as they are"; no lure about things as they have not yet been. The problem is shifted to a detailed and thoroughgoing inquiry into the consequences of specific changes in social habits, ideas and institutions, education, business, and industry. Whether changes should or should not win critical approval depends on the kind of ideals or purposes we set ourselves and, secondly, on the practicability of the proposed changes. Change may thus be opposed or approved, in a given case, on the grounds of desirability or feasibility. Whether a change is or is not desirable depends on the ideals of the individual or the group. Whether it is or is not feasible is a matter open increasingly to scientific determination. Thus a city may hire experts to discover what kind of transportation or educational system will best serve the city's needs. But whether it will or will not spend the money necessary depends on the social interests current.

Education as the transmitter of the past. Education is the process by which society undertakes the transmission of its social heritage. Indeed the main function of education in static societies is the initiation of the young into already established customs and traditions. It is the method used to hand down those social habits which the influential and articulate classes in a society regard as important enough to have early fixed in its young members. The past is simply transmitted, handed down *en masse*. It is a set of patterns

to be imitated, of ideals to be continued, of mechanisms for attaining the fixed purposes which are current in the group.

In progressive societies education may be used not simply to hand down habits of doing, feeling, and thinking, from the older generation to the younger, but to make habitual in the young reflective consideration of the ends which must be attained, and reflective inquiry into the means for attaining them. The past will not be handed down in indiscriminate completeness. The present and its problems are regarded as the standard of importance, and the past is considered as an incomparable reservoir of materials and methods which may contribute to the ends sought in the present. But there is so much material and so little time, that selection must be made. Many things in the past, interesting on their own merits, must be omitted in favor of those habits, traditions, and recorded files of knowledge which are most fruitful and enlightening in the attainment of contemporary purposes. What those purposes are depends, of course, on ideals of the group in control of the process of education. But these purposes of ideals may be derived from present situations and not taken merely because they have long been current in the group. Thus, in a predominantly industrial civilization, it may be found more advisable and important to transmit the scientific and technical methods of control which men have acquired in recent generations than the traditional liberal arts. Science may be found more important than the humanities, medicine than moral theory. Even such education that tends to call itself "liberal" or "cultural" is effective and genuine education just in so far as it does illuminate the world in which we live. The religion and art, the literature and life of the past broaden the meaning and the background of our lives. They are valuable just because they do enrich the lives of those who are exposed to their influence. If studying the great literature and the art of the past did not clarify the mind and emancipate the spirit, enabling men to live more richly in the present, they would hardly be as studiously cherished and trans-

mitted as they are. We are, after all, living in the present. The culture of the past either does or does not illuminate it. If it does not it is a competing environment, a shadow world in which we may play truant from actuality, but which brings neither "sweetness nor light" to the actual world in which we live.

PART II

THE CAREER OF REASON

The foregoing analysis of human behavior might thus be briefly summarized. We found that man is born a creature with certain tendencies to act in certain definite ways, tendencies which he largely possesses in common with the lower animals. We found also that man could learn by trial and error, that his original instinctive equipment could be modified. Thus far in his mental life man is indistinguishable from the beasts. But man's peculiar capacity, it appeared, lay in his ability to think, to control his actions in the light of a future, to choose one response rather than another because of its consequences, which he could foresee and prefer. This capacity for reflection, for formulating a purpose and being able to obtain it, we found to be practical in its origins, but persisting on its own account in the disinterested inquiry of philosophy and science and the free imaginative construction of art. And in all man's behavior, whether on the plane of instinct, habit, or reflection, we found action to be accompanied by emotion, by love and hate, anger and awe, which might at once impede action by confusing it, or sustain it by giving it a vivid and compelling motive.

The second part of the book was devoted to an analysis of the various specific traits which human beings display and the consequences that these have in men's relations with one another. Under certain conditions, one or another of these may become predominant; in particular historical conditions, one or another of them may have a high social value or the reverse. These traits vary in different individuals; in any of them, a man may be totally defective or abnormally developed. But taken in general, they constitute the changeless pattern

of human nature, and fix the conditions and the limits of action.

But while these universal traits determine what man may do, and fix definitively the boundaries of human possibility, within these limits the race has a wide choice of ideals and attainments. The standards of what man will and should do, within the boundaries of the nature which is his inheritance, are to be found not in his original impulses, but in his mind and imagination. The human being is gifted with the ability to imagine a future more desirable than the present, and to contrive ingeniously in behalf of anticipated or imagined goods.

These anticipated goods we call ideals, and these ideals arise, in the last analysis, out of the initial and inborn hungers and cravings of men. "Intellect is of the same flesh and blood with all the instincts, a brother whose superiority lies in his power to appreciate, harmonize, and save them all." The function of reason is not to set itself over against men's original desires, but to envisage ideals and devise instruments whereby they may all, so far as nature allows, be fulfilled.

Man's reason, then, which has its roots in his instincts, is the means of their harmonious fulfillment. It attempts, in the various fields of experience, to effect an adjustment between man's competing desires, and between man and his environment. If instincts were left each to its own free course, they would all be frustrated; if man did not learn reflectively to control his environment, and to make it subserve his own ends, he would be a helpless pygmy soon obliterated by the incomparably more powerful forces of Nature.

These various attempts of man to effect an adjustment of his passions with one another, and his life to his environment, may be described as the "Career of Reason." In this career man has formulated many ideals, not a small number of which have led him into error, disillusion, and unhappiness. Sometimes they have misled him by promising him fulfillments that were in the nature of things unattainable. They have

added to the real evils of life a longing after impossible goods, goods which an informed intelligence would early have dismissed as unattainable. Man has disappointed himself by counting on joys which, had he been less incorrigibly addicted to imaginative illusions, he should never have expected. Sometimes he has framed ideals which could be fulfilled, but only at the expense of a large proportion of natural and irrepressible human desires. Such, for example, have been the one-sided ascetic ideals of Stoicism or Puritanism, which in their attempt to give order and form to life, crush and distort a considerable portion of it. The same is true of mysticism which seeks frequently to attain life by altogether denying its instinctive animal basis. Yet though reason has led men astray, it is the only and ultimate hope of man's happiness. It is responsible for whatever success man has had in mastering the turmoil of his own passions and the obstacles of an environment "which was not made for him but in which he grew." It has given point and justice to Swinburne's exultant boast:

"Glory to man in the highest! For man is the master of things!"

This Career of Reason has taken various parallel fulfillments, and in each of them man has in varying degrees attained mastery. Religion arose as one of the earliest ways by which man attempted to win for himself a secure place in the cosmic order. Science, in its earliest forms hardly distinguishable from religion, is man's persistent attempt to discover the nature of things, and to exploit that discovery for his own good. Art is again an instance of man's march toward mastery. Beginning, in the broadest sense, in the industrial arts, in agriculture and handicrafts, it passes, as it were by accident, from the necessary to the beautiful. Having in his needful business fortuitously created beautiful objects, man comes to create them intentionally, both for their own sake and for the sheer pleasure of creation.

Finally in morals men have endeavored to construct for

themselves codes of conduct, ideals of life, in which no possible good should be needlessly or recklessly sacrificed, and in which men might live together as happily as is permitted by the nature which is at once their life and their habitation. The Career of Reason in these various fields we shall briefly trace and describe. We must expect to find, as in any career, however successful, failures along with the triumphs, and, as in any notable career still unfinished, possibility and great promise. Man's reason and imagination have a long past; they have also an indefinite future. Man has in the name of reason made many errors; but to reason he owes his chief success, and with increasing experience he may be expected to attain continually to a more certain and effective wisdom. With these provisos, let us address ourselves to the Career of Reason, beginning with religion.

CHAPTER XII

RELIGION AND THE RELIGIOUS EXPERIENCE

The religious experience. Since human nature remains constant in its essential traits, despite the variations it exhibits among different individuals, it is to be expected that certain experiences should be fairly common and recurrent among all human beings. Joy and sorrow, love and hate, jubilance and despair, disillusion and rapture, triumph and frustration, these occur often, and to every man. They are, as it were, the sparks generated by the friction of human desires with the natural world in which they must, if anywhere, find fulfillment. Just such a normal, inevitable consequence of human nature in a natural world is the religious experience. It is common in more or less intense degree to almost all men, and may be studied objectively just as may any of the other universal experiences of mankind.

There are, however, certain peculiar difficulties in the study of the religious experience. Most men are by training emotionally committed to one particular religious creed which it is very difficult for them impartially to examine or to compare with others. In the second place, there is a confusion in the minds of most people between the personal religious experience, and the formal and external institution we commonly have in mind when we speak of "religion." When we ordinarily use the term, we imply a set of dogmas, an institution, a reasoned theology, a ritual, a priesthood, all the apparatus and earmarks of institutionalized religion. We think of Christianity, Mohammedanism, Judaism, the whole welter of churches and creeds that have appeared in the history of mankind. But these are rather the outward vehicles and vestments of the religious experience than the experience itself. They are the social expressions and external instru-

ments of the inner spiritual occurrence. But the latter is primary. If man had not *first been religious*, these would never have arisen. In the words of William James:

> In one sense at least, the personal religion will prove itself more fundamental than either theology or ecclesiasticism. Churches when once established live at second hand upon tradition, but the *founders* of every Church owed their power originally to the fact of their direct personal communion with the divine. Not only the superhuman founders, the Christ, the Buddha, Mahomet, but all the originators of Christian sects have been in this case; so personal religion should still seem the primordial thing, even to those who esteem it incomplete.[1]

Before we examine the social institutions and fixed apparatus of ritual and of reasoned theology in which the religious experience has become variously embodied, we must pause to analyze the experience itself. To be religious, as a personal experience, is, like being philosophical, to take a total attitude toward the universe. But the religious attitude is one of a somewhat specific kind. It is, one may arbitrarily but also somewhat fairly say, to sense or comprehend one's relation to the divine, however the divine be conceived. It is to have this sense and comprehension not only deeply, as one might in a poetic or a philosophical mood, but to have it suffused with reverence. We shall presently see that the objects of veneration have had a different meaning for different individuals, groups, and generations. But whatever be the conception of the divine object, the religious attitude seems to have this stable feature. It is always an awed awareness on the part of the individual of his relation to that "something not himself," and larger than himself, with whom the destinies of the universe seem to rest. This somehow sensed relation to the divine appears throughout all the varieties of religion that have appeared in the world, and among many individuals not popularly accounted religious.

It is just such an experience, for example, that Wordsworth

[1] James: *Varieties of Religious Experience*, p. 30.

expresses when he says in the "Lines Written Above Tintern Abbey":

> "... And I have felt
> A presence that disturbs me with the joy
> Of elevated thoughts; a sense sublime
> Of something far more deeply interfused,
> Whose dwelling is the light of setting suns,
> And the round ocean and the living air,
> And the blue sky, and in the mind of man;
> A motion and a spirit, that impels
> All thinking things, all objects of all thought,
> And rolls through all things."

It is the same sense that comes over so-called worldly people when oppressed suddenly by a great sorrow, or uplifted by a sudden great joy, an awareness of a divine power that moves masterfully and mysteriously through the events of life, provoking on the part of finite creatures a strange and compelling reverence. This "divinity that shapes our ends" may be variously conceived. It may be an intimately realized personal God, "Our Father which art in Heaven." It may be such an abstract conception as the Laws of Nature or Scientific Law, such a religion as is expounded by the Transcendentalists, in particular by Emerson:

> These laws execute themselves. They are out of time, out of space, and not subject to circumstance: thus in the soul of man there is a justice whose retributions are instant and entire. ... If a man is at heart just, then, in so far is he God; the safety of God, the immortality of God, the majesty of God, do enter into that man with justice. ... For all things proceed out of the same spirit, which is differently named, love, justice, temperance, in its different applications, just as the ocean receives different names on the several shores which it washes. ... The perception of this law awakens in the mind a sentiment which we call the religious sentiment, and which makes our highest happiness. Wonderful is its power to charm and to command. It is a mountain air. It is the embalmer of the world. It makes the sky and the hills sublime, and the silent song of the stars is it. It is the beatitude of man. It makes him illimitable.[1]

It may be conceived as Nature itself, as it was by Spinoza,

[1] Emerson: *Miscellanies*, quoted by James in *Varieties*, pp. 32–33.

for whom Nature was identical with God. It may be the World-Soul which Shelley sings with such rapture:

> "That Light whose smile kindles the universe,
> That beauty in which all things work and move,
> That benediction which the eclipsing curse
> Of birth can quench not, that sustaining love,
> Which through the web of being, blindly wove,
> By man and beast and earth and air and sea,
> Burns bright or dim, as each are mirrors of
> The fire for which all thirst — now beams on me,
> Consuming the last clouds of cold mortality." [1]

In all these conceptions it still seems to be a hushed sense of reverential relationship to the divine power that most specifically constitutes the religious experience. The latter exhibits certain recurrent elements, any of which may be present in a more intense degree in some individuals than in others, but all of which appear in some degree in most of the phenomena of personal life that we call religious.

"The reality of the unseen." In the first place may be noted the sense of the actuality and nearness of the divine power, what James calls the "reality of the unseen," and what is frequently spoken of by religious men as "the presence of God." James quotes in this connection an interesting letter of James Russell Lowell's:

> I had a revelation last Friday evening. . . . Happening to say something of the presence of spirits of whom, as I said, I was often dimly aware, Mr. Putnam entered into an argument with me on spiritual matters. As I was speaking, the whole system seemed to rise up before me, like a vague destiny looming from the abyss. I never before felt the spirit of God so keenly in me, and around me. The whole room seemed to me full of God. The air seemed to waver to and fro with the presence of something I knew not what. I spoke with the calmness and clearness of a prophet.[2]

The archives of the psychology of religion are crowded with instances of men who have felt deeply, intimately, and irrefutably the near and actual presence of God. This sense of the reality of an unseen Thing or Power is not always iden-

[1] From *Adonais*.

[2] Lowell: *Letters*, I, p. 75.

tified with God. There come moments in the lives of normal men and women when the world of experience seems alive with something that is apprehended through none of the five senses. There are times when things unseen, unheard, and untouched seem to have, nay, for those concerned, do have, a clearer and more unmistakable reality than the things we can touch, hear, and see. Sometimes, in the hearing of beautiful music, we sense a transcendent beauty which is something other than, something more real than, the specific harmonies which we physically hear. In rare moments of rapture, when the imagination or the affections are intensely stirred, we become intensely aware of this reality which is made known to us through none of the ordinary avenues of experience. The Unseen is not only vividly felt, but is deeply felt and regarded as a thing of deep significance, and is experienced in most cases with great inexplicable joy. And, not infrequently, this significant and beautiful Unseen Somewhat is identified with God.

The sense of the reality of the divine, is, however, as it were, only the prerequisite of the religious experience. When an individual does have this sense, what interests the student of the psychology of religion is the attitude it provokes and the satisfactions it gives. These we can the better understand if we examine the conditions in an individual's experience which make this longing for the divine presence acute, and the general circumstances of human life which make it a continuous desire in many people.

There are, to begin with, constant facts of experience which make the realization of the divine presence not only a satisfaction, but the indispensable "staff of life" for certain human beings. In their unfaltering faith in God's enduring and proximate actuality lies their sole source of security and trust. For such persons a lapse or a lack of faith is the prelude to utter collapse. A vague general assurance of the dependability of the future is, for most people, a prerequisite for a sane and untroubled existence. Even those who live in un-

reflective satisfaction with the fruits of the moment would find these moments less satisfactory were they not set in a background of reasonably fair promise. The exuberant optimist, when he stops to reflect, has a buoyant and inclusive faith in the essential goodness of man and the universe. Whitman stands out in this connection as the classic type. Evil and good were to him indifferently beautiful. He maintained an incredibly large-hearted and magnanimous receptivity to all things great or small, charming or ugly, that lightened or blackened the face of the planet.

While the average man accepts the universe with a less wholesale and indiscriminate appreciation, yet he does feel vaguely assured that the nature of things is ordered, harmonious, dependable, and regular, that affairs are, cosmically speaking, in a sound state. He feels a vast and comfortable solidity about the frame of things in which his life is set; he can depend on the familiar risings and settings of the sun, the recurrent and assured movement of the seasons. Were this trust suddenly removed, were the cosmic guarantee withdrawn, to live would be one long mortal terror. That this is precisely what does happen under such circumstances, the voluminous literature of melancholia sufficiently proves.

The sense of insecurity takes various forms. Sometimes the patient experiences a profound and intimate conviction of the unreality of the world about him. His whole physical environment comes to seem a mere phantasy and a delusion. In some cases he finds himself unmoved by the normal interests and excitements of men, unable to find any stimulus, value, or significance in the world.

> Esquirol observed the case of a very intelligent magistrate. . . . Every emotion appeared dead within him. He manifested neither perversion nor violence, but a complete absence of emotional reaction. If he went to the theater, which he did out of habit, he could find no pleasure there. The thought of his house, of his home, of his wife, and of his absent children, moved him as little, he said, as a theorem of Euclid.[1]

[1] Ribot: *Psychology of the Emotions*, p. 54.

The sense of futility, of the flatness, staleness, and unprofitableness of the world, which is felt in such extreme forms by pronounced melancholiacs, is experienced sometimes, though to a lesser degree, by every sensitive mind that reflects much upon life. Such an attitude, it is true, arises principally during moments of fatigue and low vitality, and is undoubtedly organic in its origins, as for that matter is optimism. Again such a sense of world-weariness comes often in moments of personal disappointment and disillusion, when friends have proved false, ambitions empty, efforts wasted. At such times even the normal man echoes Swinburne's beautiful melancholy:

"We are not sure of sorrow,
And joy was never sure,
To-day will die to-morrow,
Time stoops to no man's lure;
And love grown faint and fretful,
With lips but half regretful,
Sighs, and with eyes forgetful,
Weeps that no loves endure.

"From too much love of living,
From hope and fear set free,
We thank with brief thanksgiving,
Whatever gods may be,
That no life lives, forever;
That dead men rise up never;
That even the weariest river,
Winds somewhere safe to sea." [1]

Even the eager and exuberant, if sufficiently philosophical and generous-minded, may come, despite their own success, to a deep realization of the utter futility, meaninglessness, and stupidity of life, of the essential blindnesses, cruelties, and insecurities which seem to characterize the nature of things. Unless against this dark insight some reassuring faith arises, life may become almost unbearable. In extreme cases it has driven men to suicide. Take, for example, the picture of the universe as modern materialism presents it:

[1] From *A Garden of Proserpine.*

Purposeless . . . and void of meaning is the world which science reveals for our belief. . . . That man is the product of causes that had no prevision of the end they were achieving, that his origin, his growth, his hopes and fears, his loves and beliefs, are but the outcome of accidental collocations of atoms; that no fire, no heroism, no intensity of thought or feeling can preserve an individual life beyond the grave, that all the labors of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius are destined to extinction in the vast death of the solar system, and that the whole temple of man's achievements must inevitably be buried beneath the débris of a universe in ruins — all these things if not quite beyond dispute, are yet so nearly certain that no philosophy which rejects them can hope to stand. Only within the scaffolding of these truths, only on the firm foundation of unyielding despair, can the soul's habitation henceforth be safely built.[1]

Such a prospect to the serious-minded and sensitive-spirited cannot but provoke the profoundest melancholy. There is, even for the most healthy-minded of us, sufficient ground for pessimism, bitterness, insecurity. Even if we personally — largely through the accidents of circumstance — happen to be successful, "our joy is a vulgar glee, not unlike the snicker of any rogue at his success." The utter futility and evanescence of earthly goods, beauties, and achievements is sensed at least sometimes by normally complacent souls. And so patent and ubiquitous are the evidences of decay, disease, and death at our disposal, that they may easily be erected into a thoroughgoing philosophy of life:

Vanity of vanities, saith the preacher, vanity of vanities, all is vanity.

What profit hath a man of all his labor which he taketh under the sun? . . .

All things come alike to all: there is one event to the righteous and to the wicked; to the good and to the clean, and to the unclean; to him that sacrificeth and to him that sacrificeth not: as is the good so is the sinner; and he that sweareth as he that feareth an oath. . . .

For the living know that they shall die; but the dead know not anything, neither have they any more a reward; for the memory of them is forgotten.

[1] Bertrand Russell: *Philosophical Essays*, pp. 60–61 ("The Free Man's Worship").

Also their love and their hatred and their envy is now perished; neither have they any more a portion forever in anything that is done under the sun.[1]

Religion offers solace to those perturbed and passionate souls, among others, to whom these futilities have become a rankling, continuous torment and depression. When life on earth appears fragmentary and disordered, not only nonsense but terrifying nonsense, full of hideous injustices, sickening uncertainties, and cruel destructions, men have not infrequently found a refuge in the divine. "Come unto me all ye that labor and are heavy laden, and I will give you rest."

In the religious experience man finds life to be made clear, complete, and beautiful. What seems a contradictory fragment finds its precise niche in the divine scheme, what seems dark and cruel shines out in a setting of eternal beneficence and wisdom. The experience of the individual, even the happiest, is always partial, broken, and disordered. No ideal is ever completely realized, or if realized leaves some perfection to be desired. Men living in a natural existence imagine values and ideals which can never be realized there. In religion, if anywhere, men have found perfection, and ultimate sufficiency.

This perfection, completion, and clarification of life has been attained in various ways. The religious experience itself, when intense, may give to the individual apart from a reasoned judgment, or from any actual change in his physical surroundings, a translucent insight during which he sees deeply, calmly, joyously into the beautiful eternal order of things. This mystic insight has been experienced on occasion by quite normal and prosaic men and women. While it lasts, reality seems to take on new colors and dimensions. It becomes vivid, luminous, and intense. The mystic seems to rise to a higher level of consciousness, in which he experiences a universe more significant, ordered, and unified than any commonly experienced through the senses. One may take,

[1] *Ecclesiastes.*

as an example, such an instance autobiographically and anonymously reported a few years ago, and well documented:

It was not that for a few keyed-up moments I *imagined* all existence as beautiful, but that my inner vision was cleared to the truth so that I *saw* the actual loveliness which is always there, but which we so rarely perceive; and I knew that every man, woman, bird, and tree, every living thing before me, was extravagantly beautiful, and extravagantly important. And as I beheld, my heart melted out of me in a rapture of love and delight. A nurse was walking past; the wind caught a strand of her hair and blew it out in a momentary gleam of sunshine, and never in my life before had I seen how beautiful beyond all belief is a woman's hair. Nor had I ever guessed how marvelous it is for a human being to walk. As for the internes in their white suits, I had never realized before the whiteness of white linen; but much more than that, I had never so much as dreamed of the beauty of young mannood. A little sparrow chirped and flew to a near-by branch, and I honestly believe that only "the morning stars singing together, and the sons of God shouting for joy" can in the least express the ecstasy of a bird's flight. I cannot express it, but I have seen it.

Once out of all the gray days of my life I have looked into the heart of reality; I have witnessed the truth; I have seen life as it really is — ravishingly, ecstatically, madly beautiful, and filled to overflowing with a wild joy, and a value unspeakable. For those glorified moments I was in love with every living thing before me — the trees in the wind, the little birds flying, the nurses, the internes, the people who came and went. There was nothing that was alive that was not a miracle. Just to be alive was in itself a miracle. My very soul flowed out of me in a great joy.[1]

The mystic experience is important in the study of religion because it has so frequently given those who have had it a very real feeling of "cosmic consciousness." The individual feels "for one luminously transparent conscious moment," at one with the universe; he has a realization at once rapturous and tranquil of the passionate and wonderful significance of things. He has moved "from the chill periphery to the radiant core." All the discrepancies which bestrew ordinary life are absent. All the negations of disappointment, all conflicts

[1] "Twenty Minutes of Reality," *The Atlantic Monthly*, vol. 117, p. 592.

of desire disappear. The mystic lives perfection at first hand:

> "The One remains, the many change and pass,
> Heaven's light forever shines, Earth's shadows fly,
> Life, like a dome of many colored glass,
> Stains the white radiance of eternity."

This sense of splendid unity in which all the divisive and corroding elements of selfhood are obliterated has "to those who have been there" no refutation. "It is," writes William James, "an open question whether mystic states may not be superior points of view, windows through which the mind looks out on a more extensive and inclusive world."

Whatever be the logical validity of the intense mystical insight, of his singular gift for a vivid and intimate union with eternity which has been known by so many mystics, the fruits of this insight are undeniable. During such a vision the world *is* perfect. There is no fever or confusion, but rapture and rest. And to some degree, at a religious service, a momentous crisis, joy at deliverance or resignation at calamity, during beatific interludes of friendship or of love, men have felt a clear enveloping oneness with divinity.

Such states of intense religious experience, however, are as transient as they are ineffable. Though they recur, they are not continuous, and something more than occasional vivid unions with the divine enter into the constant perfection with which the world, as it appears to the religious man, is endowed. He feels himself, in the first place, to be part of a world scheme in which ultimate perfection is secured. It has already been pointed out that any individual human life is characterized by negation, conflict, and disappointment. Our lives seem largely to be at the mercy of circumstance. Our inheritance is fixed for us without our connivance in the matter; accident determines in which social environment we happen to be born. And these two facts are the chief determinants of our careers. Even when successful we realize either the emptiness of the prize we had desired, or the distance we are in reality from

the goal we had set ourselves. Generalizing thus from his own experience, the individual notes the similar disheartening discrepancies throughout human life. He sees the good suffer, and the wicked prosper; the innocent die, and the guilty escape. Disease is no respecter of persons, and death comes to the just and the unjust alike.

Wherefore do the wicked live, become old, yea, are mighty in power?
Their seed is established in their sight with them, and their offspring before their eyes.
Their houses are safe from fear, neither is the rod of God upon them.
Their bull gendereth and faileth not; their cow calveth and casteth not her calf.
They send forth their little ones like a flock, and their children dance.
They take the timbrel and harp, and rejoice at the sound of the organ.
They spend their days in wealth, and in a moment go down to the grave.
Therefore they say unto God; depart from us, for we desire not the knowledge of thy ways.
What is the Almighty that we should serve him? And what profit should we have if we pray unto him? [1]

In contrast, in the religious experience man feels himself to be a part of a world scheme in which justice and righteousness are assured by an incontestable and invulnerable power; "God 's in his Heaven; all 's right with the world." Despite the grounds he has for doubt, Job robustly avers: "Though he slay me, yet will I trust in him." Calamities are but temporary; God will bring all things to a beautiful fruition.

Or a man may feel that the evils he or others experience here are not real evils, that, seen *sub specie æternitatis*, they would cease to be regarded as such. He may feel that God moves in a mysterious way his wonders to perform, that "somehow good may come of ill." He may feel, as does the Christian believer, that all the evils and pains unjustly experienced in this world will be adjusted in the next. Whatever be my privations from earthly good, "in my Father's house

[1] Job, chap. xxi.

are many mansions." Immortality is, indeed, the religious man's faith in a second chance. The surety of a world to come, in which the blessed shall live in eternal bliss, is a compensation and a redress for the ills and frustrations of life in this world. Whatever be the seeming ills or injustices of life, there is eventual retribution, both to the just and the unjust. Once more to quote Emerson:

> And yet the compensations of calamity are made apparent to the understanding also, after long intervals of time. A fever, a mutilation, a cruel disappointment, a loss of wealth, a loss of friends, seems at the moment unpaid loss, and unpayable. But the sure years reveal the deep remedial force that underlies all facts. The death of a dear friend, wife, brother, lover, which seemed nothing but privation, somewhat later assumes the aspect of a guide or genius; for it commonly operates revolutions in our way of life, terminates an epoch of infancy or of youth which was waiting to be closed, breaks up a wonted occupation, or a household, or style of living, and allows the formation of new ones more friendly to the growth of character. It permits or constrains the formation of new acquaintances, and the reception of new influences that prove of the first importance to the next years; and the man or woman who would have remained a sunny garden flower, with no room for its roots and too much sunshine for its head, by the falling of the walls and the neglect of the gardener, is made the banian of the forest, yielding shade and fruit to wide neighbourhoods of men.[1]

On a larger scale, from the cosmic rather than from the personal point of view, an individual, gifted with a large and charitable interest in the future of mankind, is secured and sustained by the feeling that he is a part of that procession headed to the "one far-off divine event to which the whole creation moves." The lugubrious picture of an utterly meaningless world, blind, purposeless, and heartless, which materialistic science reveals, is sufficient to wreck the equanimity of a sensitive and thoughtful mind.

> That is the sting of it, that in the vast drifting of the cosmic weather, though many a jewelled shore appears, and many an enchanted cloud-bank floats away, long lingering ere it be dissolved —

[1] Emerson: *Essay on Compensation.*

even as our world now lingers for our joy — yet when these transient products are gone, nothing, absolutely *nothing* remains. Dead and gone are they, gone utterly from the very sphere and room of being. Without an echo, without a memory; without an influence on aught that may come after, to make it care for similar ideals. This utter wreck and tragedy is of the essence of scientific materialism, as at present understood.[1]

A belief that a divine power governs the universe, that all these miscellaneous and inexplicable happenings will be gathered up into a smooth and ultimate perfection, gives faith, comfort, and solace. We are on the side of the angels, or rather the angels are on our side. Human passion, purpose, and endeavor are not wasted. They are small but not altogether negligible contributions to eventual cosmic good. And good is eventual. Perfection may be long delayed, but God's presence assures it. "Weeping may endure for a night, but joy cometh in the morning."

A world with a God in it to say the last word may indeed burn up or freeze, but we then think of Him as still mindful of the old ideals, and sure to bring them elsewhere to fruition; so that where He is, tragedy is only provisional and partial, and shipwreck and dissolution not the absolutely final things.[2]

Amid tragic errors and pitiful disillusions, men have yearned for "a benediction perfect and complete where they might cease to suffer and desire." This perfection religion has, as we have seen, accorded them in various ways. Some have found it in the immediate vision, the ecstatic union with the divine that, in intense degree, is peculiarly the mystic's. Some have found it in the assured belief that evil is itself an illusion, and, if rightly conceived, a beautiful dark shadow to set off by contrast the high lights of a divinely ordered cosmos, a minor note giving lyric and lovely poignancy to the celestial music. Some have rested their faith in a perfect world not here, but hereafter, "where the blessed would enter eternal bliss with God their master." Thus man has in religion found

[1] James: *Pragmatism*, p. 105. [2] *Ibid.*, p. 106.

the fulfillment of his ideals, which always outrun the actualities amid which he lives. In the religious experience, in all of its forms throughout the ages, man has had the experience of perfection at first hand, in the immediate and rich intensity of the mystic ecstasy, in the serene faith of a lifelong intuition or of a reasoned belief in the ultimate divinely assured rightness of things.

Besides experiencing perfection, man has, in the sense of security and trust afforded by the religious experience, found release from the fret, the fever, the compulsion, and constriction under which so much of life must be lived. Whatever happens, the truly devout man has no fears or qualms. He has attained equanimity; the Lord is his shepherd; he shall not want. There is a serenity experienced by the genuinely faithful that the faithless may well envy. God is the believer's eternal watcher; a wise and merciful Providence, his infinite guarantee.

> Whoever not only says but feels, "God's will be done" is mailed against every weakness; and the whole historic array of martyrs, missionaries and religious reformers is there to prove the tranquil-mindedness, under naturally agitating or distressing circumstances, which self-surrender brings.[1]

But peace is attained not only through faith in the fulfillment of desire, but in a marked lessening in the tension of desire itself, in a large and spacious freedom attained through release from the confinement of self. We saw in the chapter on the Consciousness of Self how much exertion and energy may be devoted to the enhancement of Self through fame, achievement, social distinction, power, or possession. We saw how, in the frustration of self, the germ of great tragedy lay. From the tragedy and bitterness of such frustration men have often been reassured by a genuine conversion to the religious life. Through the negation of self rather than through its fulfillment men have found solace and rest. And

[1] James: *Varieties of Religious Experience*, p. 285.

this negation, when it takes religious form, has consisted in a rapturous submission to the will of God.

"Outside, the world is wild and passionate.
Man's weary laughter and his sick despair
Entreat at their impenetrable gate,
They heed no voices in their dream of prayer.

"Calm, sad, secure, with faces worn and mild,
Surely their choice of vigil is the best.
Yea! for our roses fade, the world is wild;
But there beside the altar there is rest." [1]

Experiences which frequently find religious expression. The religious experience, as pointed out in the beginning of this discussion, has its roots in the same impulses which cause men to love and to hate, to be jubilant and sorrowful, exalted and depressed. All these human experiences sometimes take a religious form, that is, their expressions have some reference to the supernatural and the divine. We find, in surveying the history of religion, that certain experiences more than others tend to find religious expression. We shall examine a few of the chief of these.

Need and impotence. An awed, almost frightened sense of dependence overcomes even the most robust and healthy-minded man when he sees the forces of Nature suddenly unloosed on a magnificent scale. A terrific peal of thunder, an earthquake or a cyclone will send thrills of terror through the normally calm and self-sufficient. Even apart from such vivid and terrifying examples of the range and scale of non-human power, there comes to the reflective a sense of the frailty of human life, of the utter dependability of all human purposes and plans on conditions beyond human control. In our most fundamental industry, agriculture, an untimely frost can undo the work of the most ingenious industry and thrift. A tornado or a snowstorm can disorganize the cunning and subtle, swift mechanisms of communication which men have invented. In the field of humanly built-up relations, again, a

[1] Ernest Dowson: *Nuns of the Perpetual Adoration.*

fortune or a friendship may depend on some chance meeting; a man's profession and ideals are fixed by a single fortuitous conversation, by a chance encouragement, opportunity or frustration.

There is thus a psychological though perhaps not literal truth in the figure of Fate, or in the metaphor that speaks of human destiny as lying on the knees of the gods. Action so often wanders from intent, so much in the best-laid plans is at the mercy of external circumstance! A creature whose being can be snuffed out in a moment, whose life is less than an instant in the magnificent perspective of eternity, comes not unnaturally to be aware of his own insignificance as compared with those vast forces, some auspicious and some terrible, which are patently afoot in the world.

But as patent a fact as man's impotence is his desire. The individual realizes how powerless is a human being to fulfill, independently of external forces, those impulses with which these same inexplicable forces have launched him into the world. Thus do we feel even to-day when we have learned that the forces of Nature, obdurate to the ignorant, yet become flexible and fruitful under the knowing manipulation of science. We realize that despite our cunning and contrivance, our successes are, as it were, largely matters of grace; the changes we can make in Nature are as nothing to the slow, gradual processes by which Nature makes mountains into molehills, builds and destroys continents, develops man out of the lower animals, and, by varying climates and topographies, affects the destinies of nations.

To primitive man the sense of impotence and need were not derived from any general reflections upon the insecurity of man's place in the cosmos, but rather from the sharp pressure of practical necessity.

The helplessness of primitive man set down in the midst of a universe of which he knew not the laws, may perhaps be brought home to the mind of modern man, if we compare the universe to a vast workshop full of the most various and highly-complicated machinery

working at full speed. The machinery, if properly handled, is capable of producing everything that the heart of primitive man can wish for, but also, if he sets hand to the wrong part of the machinery, is capable of whirling him off between its wheels, and crushing and killing him in its inexorable and ruthless movement. Further, primitive man cannot decline to submit himself to the perilous test: he must make his experiments or perish, and even so his survival is conditional on his selecting the right part of the machine to handle. Nor can he take his own time and study the dangerous mechanism long and carefully before setting his hand to it: his needs are pressing and his action must be immediate.[1]

The very food of primitive man was to him as precarious as it was essential. His life was practically at the mercy of wind and rain and sun. His food and shelter were desperately lucky chances. Not having attained as yet to a conception of the impersonality of Nature, he regarded these forces which helped and hindered him as friendly and alien powers which it was in the imperative interests of his own welfare to placate and propitiate. It was in this urgent sense of helplessness and need that there were developed the two outstanding modes of communication with the supernatural, *sacrifice* and *prayer*.

Primitive man conceived his universe to be governed by essentially human powers; powers, of course, on a grand scale, but human none the less, with the same weaknesses, moods, and humors as human beings themselves. They could be flattered and cajoled; they could be bribed and paid; they could be moved to tenderness, generosity, and pity. "Holiness," says Socrates in one of Plato's dialogues, "is an art in which gods and men do business with each other. . . . Sacrifice is giving to the gods, prayer is asking of them."[2] In Frazer's *Golden Bough* one finds the remarkably diverse sacrificial rites by which men have sought to win the favor of the divine. Primitive man believed literally that the universe was governed by superhuman personal powers; he believed literally that these are human in their motives. He believed

[1] Jevons: *An Introduction to the History of Religion*, p. 17.
[2] See Plato's *Euthyphro*.

in consequence that sacrifices to the gods would help him to control the controlling powers of Nature for his own good, just as modern man believes that an application of the laws of electricity and mechanics will help him to control the natural world for his own purposes. The sacrifices of primitive man were immensely practical in character; they were made at the crucial moments and pivotal crises of life, at sowing and at harvest time, at the initiation of the young into the responsibilities of maturity, at times of pestilence, famine, or danger. The gods were given the choice part of a meal; the prize calf; in some cases, human sacrifices; the sacrifice, moreover, of the beautiful and best. The chief sacrificial rites of almost all primitive peoples are connected with food, the sustainer, and procreation or birth, the perpetuator, of life.

As Jane Harrison puts it:

> If man the individual is to live, he must have food; if his race is to persist, he must have children. To live and to cause to live, to eat food and beget children, these were the primary wants of man in the past, and they will be the primary wants of man in the future, so long as the world lasts. Other things may be added to enrich and beautify life, but unless these wants are first satisfied, humanity itself must cease to exist. These two things, therefore, were what men chiefly sought to procure by the performance of magical rites for the regulation of the seasons. . . . What he realizes first and foremost is that at certain times the animals, and still more the plants, which form his food, appear, at certain others they disappear. It is these times that become the central points, the focusses of his interest, and the dates of his religious festivals.[1]

Sacrifice is only one way primitive man contrives of winning the favor of the gods toward the satisfaction of his desires. Another common method is prayer. In its crudest form prayer is a direct petition from the individual to divinity for the grant of a specific favor. The individual seeks a kindness from a supernatural power whose motives are human, and who may, therefore, be moved by human appeals; whose power is superhuman and can therefore fulfill requests.

[1] Jane Harrison: *Ancient Art and Ritual*, p. 31.

Prayer may become profoundly spiritualized, but in its primitive form it is, like sacrifice, a certain way of getting things done. They are both to primitive man largely what our science is to us.

Both prayer and sacrifice arise in primitive man's need and helplessness and terror before mysterious supernatural powers, but they may rise, in the higher form of religion, to genuine nobility, from this crass commerce with divinity, this religion of bargaining and *quid pro quo*. Sacrifice may change from a desperate reluctant offering made to please a jealous god, to a thanksgiving and a jubilation, an overflowing of happiness, gratitude, and good-will.

Greek writers of the fifth century B.C. have a way of speaking of an attitude toward religion, as though it were wholly a thing of joy and confidence, a friendly fellowship with the gods, whose service is but a high festival for man. In Homer, sacrifice is but, as it were, the signal for a banquet of abundant roast flesh and sweet wine; we hear nothing of fasting, cleansing, and atonement. This we might explain as part of the general splendid unreality of the Greek saga, but sober historians of the fifth century B.C. express the same spirit. Thucydides is by nature no reveller, yet religion is to him, in the main, a rest from toil. He makes Pericles say of the Athenians: Moreover we have provided for our spirit very many opportunities of recreation, by the celebration of games and sacrifices throughout the year.[1]

Sacrifice may become spiritualized, as it is in Christianity, "instead of he-goats and she-goats, there are substituted offerings of the heart for all these vain oblations." The sacrificial heart has at all times been accounted germane to nobility. There is something akin to religion in the laying down of a life for a cause or a country or a friend, in surrendering one's self for others. It is this power and beauty of renunciation that is the spiritual value behind all the rituals of sacrifice that still persist, as in the sacraments of Christianity. It is the tragic necessity of self-negation that haloes, even in secular life, the sacrificial attitude:

[1] Jane Harrison: *Prolegomena to Greek Religion*, p. 1.

But there is in resignation a further good element. Even real goods when they are attainable ought not to be fretfully desired. To every man comes sooner or later the great renunciation. For the young there is nothing unattainable; a good thing desired with the whole force of a passionate will, and yet unattainable, is to them not credible. Yet by death, by illness, by poverty, or, by the voice of duty, we must learn, each one of us, that the world was not made for us, and that, however beautiful may be the things we crave, Fate may nevertheless forbid them. It is the part of courage, when misfortune comes, to bear without repining the ruin of our hopes, to turn away our thoughts from vain regrets. This degree of submission to power is not only just and right; it is the very gate of wisdom.[1]

The spiritual meaning and value of sacrifice is thus seen to lie in self-surrender. The human being, born into a world where choices must be made, must make continual abnegation. And when the temporary good is surrendered in the maintenance of an ideal, sacrifice becomes genuinely spiritual in character.

Prayer, also, becomes genuinely spiritual in its values when one ceases to believe in its practical efficacy and comes to think it shameful to traffic with the divine. Prayer beautifully illustrates a point previously noted, how speech oscillates between the expression of feeling and the conveyance of ideas. Beginning in primitive religion as a crude and cheap petition for favors, it becomes in more spiritual religious experience, a lyric cry of emotion, a tranquil and serene expression of the soul's desire. Prayer is, moreover, "religion in act." That deep sense of an awed relationship to divine power which was, in the beginning of this discussion, noted as constituting certainly one of the outstanding characteristics of the religious experience, finds its most adequate emotional expression in prayer.

Religion is nothing [writes Auguste Sabatier] if it be not the vital act by which the entire mind seeks to save itself by clinging to the principle from which it draws life. This act is prayer, by which I understand no vain exercise of words, no mere repetition of certain

[1] Bertrand Russell: *Philosophical Essays*, p. 65.

sacred formulas, but the very movement itself of the soul, putting itself in a personal relation of contact with the mysterious power of which it feels the presence — it may be even before it has a name by which to call it. Wherever this interior prayer is lacking, there is no religion; wherever, on the other hand, this prayer rises and stirs the soul, even in the absence of forms or doctrines, we have religion.[1]

In prayer, furthermore, we may hope to find not the fulfillment of our desires, but what our desires really are. We are released temporarily from tension of temporal and selfish longings. We hold a tranquil and reverential speech with a power not ourselves, and in communion with the infinite purge ourselves of the dross of immediate personal needs. In such a peaceful interlude we may find at once clarity and rest. Prayer, at its highest, might be defined as audible meditation, controlled by the sense of the divinity of the power we are addressing. So that the truly spiritual man prays not for the fulfillment of his own accidental longings, but pleads rather: "Let the words of my mouth and the meditations of my heart be acceptable in thy sight, O Lord, my strength and my redeemer."

Fear and awe. Man's attitude toward the divine was noted to have arisen partly in his feeling of dependence on personal forces incomparably superior to himself, and in his urgent need for winning their favor. In primitive man this sense of dependence was certainly bound up with a feeling of fear.

It must be borne in mind that uncivilized peoples had pathetically little understanding or control of the forces of Nature. In consequence on being afflicted with some sudden catastrophe of famine or disease, on experiencing a sudden revelation in storm, wind, or volcanic eruption, of the terrible magnificence of elemental forces, he must have been struck with dread. He was living in a world that appeared to him much less ordered and regular than ours appears to us. His

[1] A. Sabatier: *Esquisse d'une Philosophie de la Religion* (ed. 1897), pp. 24–26.

prayers and sacrifices were not always friendly and confidential intercourse with the gods; they were as often ways of averting the evils of malicious and terrifying demons. The enemies of religion have been fond of pointing out how much of it has been a quaking fear of the supernatural. It is in this spirit that Lucretius's bitter attack is conceived.

> When the life of man lay foul to see and grovelling upon the earth, crushed by the weight of religion, which showed her face from the realms of heaven, lowering upon mortals with dreadful mien, 't was a man of Greece who dared first to raise his mortal eyes to meet her, and first to stand forth to meet her; him neither the stories of the gods nor thunderbolts checked, nor the sky with its revengeful roar, but all the more spurred the eager daring of his mind to yearn to be the first to burst through the close-set bolts upon the doors of nature.[1]

Primitive man feared the gods as much as he needed them. Jane Harrison points out, for example, that as great a part of Greek religion was given over to the exorcising of the evil and jealous spirits of the underworld, as in friendly communion with the beautiful and gracious Olympians.

But what appears in the ignorant and harassed savage as fear may be transformed in civilized man into awe. Long after man's crouching physical terror of the divine has passed away, he may still live awed by the ultimate power that orders the universe. He may, "at twilight, or in a mountain gorge," at a cañon or waterfall, experience an involuntary thrill and breathlessness, a deepened sense of the divinity which so orders these things. He may have the same feeling at the crises of life, at birth, disease, and death. He may sense on occasion that overwhelming and infinite power of which Job becomes aware, as he listens to the voice out of the whirlwind:

> Who hath divided a water course for the overflowing of waters, or a way for the lightning of thunder?
> To cause it to rain on the earth, where no man is; on the wilderness, wherein there is no man;

[1] Lucretius: *De Rerum Natura*, book I, lines 28–38.

To satisfy the desolate and waste ground; and to cause the bud of the tender herb to spring forth? . . .
Canst thou bind the sweet influences of the Pleiades, or loose the bands of Orion? . . .
Knowest thou the ordinances of Heaven? Canst thou set the dominion thereof in the earth? . . .
Canst thou send lightnings, that they may go and say unto thee, Here we are?
Who hath put wisdom in the inward parts? Or who hath given understanding to the heart?

Where man experiences such awe, he will become reverential, and, if articulate, will express his reverence in prayer, again not the prayer of practical requests for favors from God, but a hushed meditation upon the assured eternity in which the precarious and finite lives of men are set.

Regret, remorse — Repentance and penance. Regret is a sufficiently common human experience. There are for most men wistful backward glances in which they realize what might have been, what might have been done, what might have been accomplished. For many this never rises above pique and bitterness over personal failure, a chagrin, as it were, over having made the wrong move. But to some regret may take on a deeply spiritual quality. Instead of regretting merely the successes which he hoped, as it proved vainly, to attain, a man may become passionately aware of his own moral and spiritual shortcomings. This sense of dereliction and delinquency may take extreme forms. James quotes a reminiscence of Father Gratry, a Catholic philosopher:

> . . . All day long without respite I suffered an incurable and intolerable desolation, verging on despair. I thought myself, in fact, rejected by God, lost, damned! I felt something like the suffering of hell. Before that I had never even thought of hell. . . . Now, and all at once, I suffered in a measure what is suffered there.[1]

Normal individuals may come to a deep consciousness of having left undone the things they ought to have done, of having done the things they ought not to have done. This

[1] Quoted by James in his *Varieties*, p. 146.

realization may be at once a "consciousness of sin," and a desire for a new life. If it is the consciousness of sin which becomes predominant, then a desolate and tormenting remorse engulfs the individual. But the consciousness of sin for the religious becomes simply a prelude to entrance upon a better life. The awareness of past sins is combined in the religious, especially in devout Christians, with faith in God's mercy, and in his welcoming of the penitent sinner:

The sacrifices of God are a broken spirit; a broken and a contrite heart, O God, thou wilt not despise.
Have mercy upon me, O God; according to thy loving kindness, blot out my transgressions.
Wash me throughly from mine iniquity, and cleanse me from my sin.
For I acknowledge my transgressions, and my sin is ever before me.
Purge me with hyssop and I shall be clean; wash me, and I shall be whiter than snow.

Again the New Testament call to repentance is symbolic of the experience of millions of religious people. "Repent ye, for the kingdom of Heaven is at hand." There is a terrible intensity and immediate imperativeness about this call. But to all there comes at one time or another an urgent sense of spiritual shortcoming and the desire to lead a better life. The lamenting of sins becomes the least part; what is important is the immense new impetus toward a better life. The records of religious conversion are full of instances where men by this sudden penitential revulsion from their past life and a startled realization of new spiritual possibilities, have broken away permanently from lifelong habitual vices. James cites a case of an exceedingly belligerent and pugilistic collier named Richard Weaver, who was by a sudden conversion to religion not only made averse to fighting, but persistently meek and gentle under provocation. Similar cases, genuine and well documented, fill the archives of religious psychology.

The religious man in repenting knows that God will, if his repentance is sincere, forgive him, and sustain and support him in his new life.

I say unto you that likewise joy shall be in Heaven over one sinner that repenteth, more than over ninety and nine just persons which need no repentance.

I say unto you there is joy in the presence of the angels of God over one sinner that repenteth.[1]

While regret over sin, alienation from a past life of evil, and a persistent dedication to a purified and righteous existence constitute, spiritually, the phenomena of repentance and conversion, repentance has had in religion certain fixed outward forms. If sin had been committed, merely inward spiritual realization was not sufficient, penance must be done. Penance in the early days of the Christian Church was public. Later penance became a private matter (public penance was suppressed by an ordinance of Pope Leo I in 461 A.D.).

Private penance took various familiar forms, such as scourgings, fastings on bread and water, reciting a given number of psalms, prayers, and the like. Later penalties could be redeemed by alms. A penitent would be excused from the prescribed works of penance at the cost, *e. g.*, of equipping a soldier for the crusade, of building a bridge or road. Gradually in the history of the Christian religion, penances have been lightened. In the Protestant Church, with the enunciation of the principle of justification through faith alone there could be no sacrament of penance.

One form in which the penitential mood receives expression is in confession in which the penitent acknowledges his sins. There is no space here to trace the development of this practice in religion. It must suffice to point out that psychologically it is a cleansing or purgation. It clears the moral atmosphere. It is a relief to the tormented and remorseful soul to say "Peccavi," and to confide either directly or indirectly to the divine the burden of his sins. It is for many people the necessary pre-condition, as it is in the Catholic Church, to penitence and the actual performance of penance.

The psychological value of confession varies with individual

[1] Luke, 15: 7,10.

temperaments; for many it is high. There are few so self-contained and self-sufficient that they do not seek to express their emotions to others. It is not surprising that the gregarious human creature should find confession a restorative and a solace. Human beings are not only natively responsive to the emotions of others, but by nature tend to express their own emotions and to be gratified by a sympathetic response. Emotions of any sort, joyous or sorrowful, find some articulation. The oppressive consciousness of sin particularly must find an outlet in expression. And the expression of sin must somewhere be received. The wrong done rankles heavily in the private bosom. The crucified soul demands a sympathetic spirit to receive its painful and personal revelation. He that would confess his sins requires a listener of a large and understanding heart. Just such a merciful, forgiving, and understanding friend is the God whom Christianity pictures. God waits with infinite patience for the confessions and the surrender of the contrite heart. The normal human desire to rid one's self of a tormenting secret, to "exteriorize one's rottenness," finds satisfaction on an exalted plane in confession to God, or to his appointed ministers.

Joy and enthusiasm — Festivals and thanksgivings. So far our account has been confined to experiences in which man felt the need or fear of the divine, because of his own desires, weaknesses, or sins. But humans find religious expression for more joyous emotions. Even primitive man lives not always in terror or in tribulation. There are occasions, such as plentiful harvests, successful hunting, the birth of children, which stir him to expressions of enthusiastic appreciation and gratitude toward the divine. Some of the so-called Dionysiac festivals in ancient Greece are examples of the enthusiasm, joy, and abounding vitality to which religion has, among so many other human experiences, given expression. In the religion of the Old Testament, again, we find that the Psalmist is time and again filled with rejoicing:

O give thanks unto the Lord, for he is good, and his mercy endureth forever.
Let the redeemed of the Lord say so, whom he hath redeemed from the hand of the enemy.
And he gathered them out of the lands from the east and from the west, from the north and from the south.
They wandered in the wilderness in a solitary way; they found no city to dwell in.
Hungry and thirsty their soul fainted in them.
Then they cried unto the Lord in their trouble, and he delivered them out of their distresses.
And he led them forth by the right way that they might go to a city of habitation.
O that men would praise the Lord for his goodness, and for his wonderful works to the children of men.
For he satisfieth the longing soul and filleth the hungry heart with goodness.

Nor need this rejoicing be always an explicit thanksgiving for favors received. It may be, as were the dithyrambic festivals of Greece, the riotous overflow of enthusiasm, a joyous, sympathetic exuberance with the vital processes of Nature. Dionysos stood for fertility, life, gladness, all the positive, passionate, and jubilant aspects of Nature. And the well-known satyr choruses, the wine and dance and song of the Greek spring festivals, are classic and beautiful illustrations of the religion of enthusiasm. Euripides gives voice to this spirit in the song of the Mænads in the *Bacchæ:*

"Will they ever come to me, ever again,
The long, long dances,
On through the dark till the dim stars wane?
Shall I feel the dew on my throat and the stream
Of wind in my hair? Shall our white feet gleam
In the dim expanses?
O feet of a fawn to the greenward fled,
Alone in the grass and the loveliness?" [1]

Every religion has its festival as well as its fast days. Sacrifices come to be held less as offerings to jealous gods than as sacrificial feasts, in which the worshipers themselves partake,

[1] Euripides: *Bacchæ* (Gilbert Murray translation).

as opportunities for communal rejoicings and for friendly fellowship with divinity. At sacrificial feasts it is as if the gods themselves were at table.

Dance and song are a regular accompaniment of primitive religion. Students of Greek drama, such as Jane Harrison and Gilbert Murray, trace Greek tragedy back to the choruses and dances of early Dionysiac festivals. Throughout the history of religion not only have man's sorrow and need been expressed, but also his sympathetic gladness with vitality, fertility, and growth, his rejoicings over the fruitions and glad eventualities of experience. Man has felt the decay and evanescence of human goods. He has felt also the exuberance of natural processes, the triumph of life over death when a child is born, the renewal of life by food, the recurrence of growth and fertility in the processes of the seasons, of sowing and of harvest. And for all these enrichments and enlargements of life, he has rejoiced, and found rituals to express his rejoicings. He has had the impulse and the energy to sing unto the Lord a new song.

Theology. Thus far we have discussed the religious experience *as* an experience, as normal, natural, and inevitable as are love and hate, melancholy and exaltation, joy and sorrow. Like these latter, the religious experience is subjected to rationalization. Like all other emotions, that of religion finds for itself a logic and a justification. But so profoundly influential is "cosmic emotion" on men's lives that when it is reasoned upon, the results are nothing less than an attitude taken toward the whole of reality. Theology arises as a world view formulated in accordance with a reasoned interpretation of the religious experience. It must be noted again that the experience is primary. If men had not first had the experience of religion, they would not have reflected about it. Every contact of the individual with the world to some degree arouses emotion and provokes thought. It is not different with religion. That theologies should differ and conflict is not surprising. No two individuals, no two groups or ages have

precisely the same experiences of the world, and their reasonings upon their religious feelings are bound to differ, overlap, and at times to conflict. The variety of world views are testimony to the genuineness of the religious experience as it fulfills the different needs, emotions, and desires of different ages, groups, and generations of men.

The description of the divine. Reasonings upon religion exhibit, like the religious emotions, certain recurrent features. There is, in the first place, a certain universality in the description of the objects of veneration. These are nearly always regarded as self-sufficient in contrast with man. Man seeks, strives, desires, has partial triumphs and pitiful failures, is always in travail after some ideal. His life is incomplete; at best it is a high aspiration; it is never really fulfilled. But divinity has nearly always been regarded as seeking nothing, asking nothing, needing nothing. This is what infinity in practical terms means. And, with certain exceptions presently to be noted, the divine power has always been regarded as infinite. Thus Aristotle says that in man's best moments, when he lives in reflection a life of self-sufficiency, he lives just such a life as God lives continually. And Plato describes the philosopher as a man who because he can live, at least temporarily, amid eternal, changeless beauty and truth, "lives in recollection among those things among which God always abides, and in beholding which God is what he is." Lucretius also gives a simple picture of the even calmness and still, even security of the life of the gods as he and all the Epicureans conceived it. Tennyson paraphrases the picture:

> " . . . The Gods, who haunt
> The lucid interspace of world and world,
> Where never creeps a cloud, or moves a wind,
> Nor ever falls the least white star of snow,
> Nor ever lowest roll of thunder moans,
> Nor sound of human sorrow mounts to mar
> Their sacred everlasting calm!" [1]

[1] Tennyson: *Lucretius*.

Divinity has, again, quite universally been recognized as exerting over the individual a compelling power, and of insistently arousing his veneration. The psychological origins of this phenomenon have already been noted. Men fear, need, feel themselves dependent on the gods. But further than this many religious thinkers hold that man cannot even be aware of the divine power without wishing to adjust himself harmoniously to it. And they hold, as did Immanuel Kant, that man is born with an awareness of the divine.

The attributes of divinity have been differently assigned at different times in the history of religion. In general two qualities have been regarded as characteristic: power and goodness. In primitive belief, the first received the predominant emphasis; the higher religions have emphasized the second. For savage man, as we have seen, the divine personages were conceived in effect as human beings with superhuman powers. They were feared and flattered, needed and praised. Adjustment to them was a practical, imperative necessity. They combined infinite capacity with human and finite caprice. The attention they received from humans was distinctly utilitarian in character. These forces of wind and sun and rain might be brutal or benignant. Primitive man established, therefore, a system of magic, sacrifice, and prayer, whereby he might minimize the precariousness of existence, and keep the gods on his side.

In the more spiritualistic monotheistic religions, while the power of God has been insistently reiterated, there has been an increasing emphasis upon the divine goodness. The Psalmist is continually referring to both:

> Praise ye the Lord. O give thanks unto the Lord; for he is good: for his mercy endureth forever.
> Who can utter the mighty acts of the Lord?
> . . . . . .
> Oh that men would praise the Lord for his goodness, and for his wonderful works to the children of men!
> For he hath broken the gates of brass, and cut the bars of iron in sunder.

Wrath and terror gradually give place to mercy and benevolence as the primary attributes of the divine. The power of God, in Christianity, for example, is still regarded as unlimited, but it is completely expended in the loving salvation of mankind. Where the divinity has ceased to be a willful power and has become instead the God of mercy and lovingkindness, it is no longer necessary to placate him by material sacrifice, to win his favor by trivial earthly gifts. Divine favor is sought rather by aspiration after and the practice of a better life. The mighty but capricious deity gives place to the God of unfailing charity and love. One earns God's mercies by walking in the ways of the Lord. "Blessed are the pure in heart, for they shall see God. . . . Blessed are they which do hunger and thirst after righteousness, for they shall be filled." In both Christianity and Judaism, God's grace and mercies go always to the pure in heart, and the righteous in spirit. "What doth the Lord require of thee," proclaims Micah, "but to do justly, and to love mercy and to walk humbly with thy God?"

The divine as the human ideal. There has been in certain latter-day philosophies, a tendency to interpret the divine as the objectification of human ideals. That is, according to this theory, men have found in their imagined divinities the fulfillment of ideals that they could never have realized on earth. Men, says this theory, long to be immortal, so they imagine gods who are. Finite man has infinite desires. In God is infinite fulfillment through eternity. No men are all good; some desire to be. Such fulfillment they find in the divine. Our conception of God is an index of our own ideals. When men were savages, their divinity was a jealous monster. In the refinement and spiritualization of the human imagination, divinity becomes all-beautiful and all-benevolent as well as the wielder of infinite power. John Stuart Mill gives possibly the clearest expression to this attitude which is, if not in the strictest sense religious, at least deeply spiritual:

Religion and poetry address themselves, at least in one of their aspects, to the same part of the human constitution; they both supply the same want, that of ideal conceptions grander and more beautiful than we see realized in the prose of human life. Religion, as distinguished from poetry, is the product of the craving to know whether these imaginative conceptions have realities, answering to them in some other world than ours. The mind, in this state, eagerly catches at any rumors respecting other worlds, especially when delivered by persons whom it deems wiser than itself. To the poetry of the supernatural, comes to be thus added a positive belief and expectation, which unpoetical minds can share with the poetical. Belief in a God or gods, and in a life after death, becomes the canvas which every mind, according to its capacity, covers with such ideal pictures as it can either invent or copy. In that other life each hopes to find the good which he has failed to find on earth, or the better which is suggested to him by the good which on earth he has partially seen and known. More especially this belief supplies the finer minds with material for conceptions of beings more awful than they *can* have known on earth, and more excellent than they probably *have* known.[1]

In his religion, Mill maintains, man thus finds the fulfillment of unfulfilled desire. Religion is thus conceived as an imaginative enterprise of a very high and satisfying kind. It peoples the world with perfections, not true perhaps to actual experience, but true to man's highest aspirations. It gives man companionship with divinity at least in imagination. It enables him to live, at least spiritually, in such a universe as his highest hopes and desires would have him live in, in fact. It must be pointed out, however, that the devoutly religious do not regard their God as a beautiful fiction, but as a dear reality whom they can serenely trust and love, and whose existence is the certain faith by which they live.

The religious experience, theology, and science. It has already been pointed out that theology is the reasoned formulation of the religious experience which comes to men with varying degrees of intensity, or the revelation by which some man, a Moses or a Mohammed, has been inspired. Such a formulation has a dual importance. For the individual it brings clarity, order, and stability into his religious experience.

[1] Mill: *Three Essays on Religion* (Henry Holt & Co.), pp. 103–04.

For the group, it makes possible the social transmission of religious conceptions and ideals.

Reason in a man's religion, as in any other experience, introduces stability, consistency, and order. It makes distinctions; it resolves doubts, confusions, and uncertainties. It is true that there have been in religion, as in politics and morals, rebels against reason. There have been mystics who preferred their warm ecstatic visions to the cold formulations and abstractions of theology. But there have been, on the other hand, those gifted or handicapped, according to one's point of view, by an insistence on reason as well as rapture in their religion. These have not been satisfied with an intuition of God. They have wished to know God, as the highest possible object of knowledge. Thus in the Middle Ages philosophy and science were regarded as the Handmaids of Theology. All was dedicated to, as nothing could be more important than, a knowledge of God. So we have, in contrast with ecstatic visions of God, the plodding analysis of the scholastics, the subtle and clean-cut logic by which such men as Saint Anselm sought to give form, clarity, and ultimacy to their sense of the reality of God. There has possibly nowhere in the history of thought been subtler and more thoroughgoing analysis than some of the mediæval schoolmen lavished upon the clarification and demonstration of the concept of God. The necessity for reasoning upon one's sense of the reality of the divine, as it was felt by many mediæval schoolmen, is thus stated by one historian:

> Anselm, Archbishop of Canterbury . . . is the true type of the schoolman; firmly convinced of the truth of the dogmas and yet possessed of a strong philosophical impulse, he seeks to prove to reason what has to be accepted on authority. He bravely includes in his attempt to rationalize the faith not only such general propositions as the existence of God, but the entire church scheme of salvation, the Trinity, and Incarnation, and the Redemption of man. We must believe the Catholic doctrine — that is beyond cavil — but we should also try to understand what we believe, understand *why* it is true.[1]

[1] Thilly: *History of Philosophy*, p. 169.

But theology has public as well as purely private importance. It must not be forgotten that religion is a social habit as well as a personal activity. From primitive life down to our own day, religion has been intimately associated with the other social activities of a people, and has indeed been one of the chief institutions of moral and social control. Ethical standards have been until very recent times in the history of Christian Europe almost exclusively derived from religion. Where the religious experience is of such crucial importance, it has been necessary to give it a fixed form and content which might be used to initiate the young and the outsider.

Theology, though essentially a product of reflection upon the religious experience itself, tends to incorporate extra-religious material into its system. In its demonstration of the divine order and of man's relationship to the divine, it incorporates both science and history. Science becomes for it the manifestation of the divine arrangements of the universe; history becomes a revelation of the divine purpose and its realization. In primitive belief science and religion are practically indistinguishable from each other. The way of the gods is the way of the universe. The attribution of personal motives to the gods was primitive man's literal and serious way of conceiving the government of the cosmos. He believed himself actually to be living in a world governed by living and personal powers, an animistic world. The myths which describe the birth and life of the gods, the creation of man, the bestowing of the gift of fire are conceived as the literal and natural history of creation.

Christianity affords a striking example of how theology incorporates science and natural history into its world view. For the early Christian Fathers, natural science was interesting and useful in so far as it illustrated, which it did, the ways of God upon earth.

"The sole interest [of the Fathers] in natural fact," writes Henry Osborn Taylor, "lay in its confirmatory evidence of Scriptural truth. They were constantly impelled to understand facts in conformity

with their understanding of Scripture, and to accept or deny accordingly. Thus Augustine denies the existence of Antipodes, men on the opposite side of the earth, who walk with their feet opposite to our own. That did not harmonize with his general conception of spiritual cosmogony." [1]

All the natural science current, as represented, for example, in the compilation called the *Physailogus*, is used as symbolical of the ways of the Lord to man.

The Pelican is distinguished by its love for its young. As these begin to grow they strike at their parents' faces, and the parents strike back and kill them. Then the parents take pity, and on the third day the mother comes and opens her side and lets the blood flow on the dead young ones, and they become alive again. Thus God cast off mankind after the Fall, and delivered them over to death; but he took pity on us, as a mother, for by the Crucifixion He awoke us with His blood to eternal life.[2]

History is treated in the same way. Nearly all the histories written by the early Christian Fathers were written in deliberate advocacy of the Faith. It was to silence the heresies of those who attributed to the Church the entrance of Alaric into Rome that Augustine wrote his famous *City of God*. The whole of history is a revelation of the divine purpose which is eventually to be fulfilled. Orosius, again, a disciple of Augustine, wrote his *Seven Books of Histories against the Pagans* to prove the abundance of calamities which had afflicted mankind before the birth of Christ. He gathers together all the evidence he can to exhibit at once the patience and the power of God. "Straitened and anxious minds" might not be able to see the purpose always, but all was ordained for one end. Thus he writes at the beginning of his seventh book:

The human race from the beginning was so created and appointed that living under religion with peace without labor, by the fruit of obedience it might merit eternity; but it abused the Creator's goodness, turned liberty into wilful license, and through disdain fell into forgetfulness; now the patience of God is just and doubly just, oper-

[1] H. O. Taylor: *The Mediæval Mind*, vol. I, pp. 75–76.
[2] Thilly: *loc. cit.*, p. 76.

ating that this disdain might not wholly ruin those whom He wished to spare . . . and also so that He might always hold out guidance although to an ignorant creature, to whom if penitent He would mercifully restore the means to grace.[1]

History thus comes to reveal the fulfillment of the divine purpose, as science reveals the divine arrangements of the universe.

It has already been noted that theology, certainly Christian theology, maintains that God is all-good. In consequence the natural world which scientific inquiry reveals must be all-good in its operations and its fruits. The history of the universe must be a steady and unfaltering fulfillment of the divine, of the beneficent eternal purpose. The ways of the Almighty, so theology tells us, are just ways, and the universe in which we live, so theology tells us, is a revelation of that justice. The eighteenth century "natural theologians" spent much energy in demonstrating how perfectly adapted to his needs are man's natural environment and his organic structure. They pointed to the eye with its delicate membranes so subtly adapted to the function of sight. All Nature was a continuous and magnificent revelation of God's designs, which were good. Christian Wolff, for example, a rationalistic theologian of the late eighteenth century, writes:

God has created the sun to keep the changeable conditions on the earth in such an order that living creatures, men and beasts, may inhabit its surface. . . . The sun makes daylight not only on our earth, but also on the other planets; and daylight is of the utmost utility to us; for by its means we can commodiously carry on those occupations which in the night-time would either be quite impossible, or at any rate impossible without our going to the expense of artificial light.[2]

Mechanistic science and theology. With the rise of mechanistic science there has come about a sharp collision between

[1] Orosius: *Seven Books of Histories against the Pagans*, II, 3.

[2] Christian Wolff: *Vernünftige Gedanken von den Absichten der natürlichen Dinge*, 1782, pp. 74 ff.; quoted by James in *Varieties of Religious Experience*, p. 492.

the conception of the goodness of the universe as theology declares it, and of its blindnesses and indifference as science seems to unfold it to us. Contrast the picture of a cosmos which was deliberately and considerately made by God to serve every exigency of man's welfare, with the picture earlier quoted from Bertrand Russell as the natural scientist gives it to us. It is no longer easy to say the Heavens declare the glory of God, and the firmament showeth his handiwork. As far as we can see natural processes go on without the slightest reference to the welfare of man, who is but an accidental product of their indifferent forces. The universe is a system of blind regularities. "Omnipotent matter rolls on its relentless way." Nature is thoroughly impersonal, and indeed, were it to be judged by personal or human standards, it could with more accuracy be maintained that it is evil than that it is good. As Mill puts it in a famous passage:

> In sober truth, nearly all the things which men are hanged or imprisoned for doing to one another, are Nature's everyday performances. Killing, the most criminal act recognized by human laws, Nature does once to every being that lives, and in a large proportion of cases, after protracted tortures such as only the greatest monsters whom we read of ever purposely inflicted on their living fellow-creatures. . . . Nature impales men, breaks them as if on the wheel, casts them to be devoured by wild beasts, burns them to death, crushes them with stones like the first Christian martyr, starves them with hunger, freezes them with cold, poisons them by the quick or slow venom of her exhalations. . . . A single hurricane destroys the hopes of a season; a flight of locusts or an inundation desolates a district; a trifling chemical change in an edible root starves a million of people.[1]

The theology which insists on the patent and ubiquitous evidences of God's beneficent purpose, attempts, as already pointed out, to demonstrate that purpose in the history of mankind. Orthodox Christian doctrine, for example, insists that man has been especially created by God, as were the other animals each after their kind, and that man's ultimate

[1] Mill: *Three Essays on Religion* (Holt), pp. 28–30.

and unique destiny is salvation through God's grace. Man was created in perfection in the Garden of Eden, sinned, and will, through God's mercy, find eventual redemption.

Following the publication of Darwin's *Origin of Species*, in 1859, the rapid spread of evolutionary doctrine aroused violent opposition on the part of Christian thinkers and devout Christians generally. In the first place it conflicted sharply with the orthodox version of special creation. Secondly, it made more difficult the insistence on marks of design or purpose in Nature. These two points will be clearer after a brief consideration of the nature of Darwinian evolution, with whose thoroughgoing mechanical principles nineteenth-century theology came most bitterly in conflict. The theory explains the origins of species, somewhat as follows:

The variety of species now current developed out of simpler forms of animal life, from which they are lineally descended. Their present forms and structures are modifications from the common forms possessed by their remote ancestors. These modifications are, in the stricter forms of Darwinian evolution, explained in mechanical terms by the theory of the "survival of the fittest." That is, those animals with variations adapted to their environment survive; those without, perish. In consequence when any individual in a species happens to be born with a variation specially adapted to its environment, in the sharp "struggle for existence" that characterizes animal life in a state of nature, it alone will be able to survive and reproduce its kind. All the variations of species current are, therefore, examples of this continuous process of descent with adaptive modifications. The origin of the human species came about through just such a variation or mutation from one of the higher mammals (we have reason to believe, a species similar to that of the anthrapoid ape). Man's ancestry, it seems, from the scientific evidence which has been marshaled, may be traced back biologically, in an almost unbroken chain to unicellular animals.[1]

[1] For detailed discussion see Scott: *Theory of Evolution.*

This theory profoundly affected theological thinking. In the first place, the evolutionary account not only of the origin of man, but of the origin of all species, as a descent with modification from simpler animal forms, conflicts with the account of special creation, certainly in the literal form of the Biblical story. Secondly, the arguments from design which had been drawn from the adaptation of organic life to environment were, if not disproved, at least rendered dubious. Although evolution did not account for the first appearance of life on earth, it did account for the processes of adaptation, and without invoking design or purpose.

The eye, for example, as explained by the theory of evolution, came to its present perfection through a series of fortunate and cumulative variations through successive generations. Even in its imperfect form, it was a variation with high "survival value." Even when it was no more than a pigmented spot peculiarly sensitive to light, so the theory holds, it was a variation that enabled a species to survive and perpetuate its kind. Those not possessing these fortunate variations were wiped out. The process of Nature, certainly, in the development of biological life thus appears to be no economical convergence of means upon an end. Nature has been recklessly prodigal. Millions more seeds of life are produced than ever come to fruition. And only animals perfectly adapted to their environment survive, while an incomparably greater number perish.

Theology, when it incorporates science and sets itself up as a direct and factual description of the universe, thus comes sharply in rivalry with modern mechanistic science. The conflict is crucial with regard to the purpose which theology holds to be evident in the universe, and the lack of purpose, the purely blind regularity, which science seems to reveal. The mechanical laws by which natural processes take place exhibit a fixed and changeless regularity, in which man's good or ill counts absolutely nothing. The earth instead of being the center of the solar system, is a cosmic accident thrown

out into space. Man instead of being a little lower than the angels is revealed by science as a little higher than the ape.

There is no space in these pages to trace the various reconciliations that have been made between theology and science. It must be pointed out, however, that Christian theology has increasingly accepted modern mechanistic doctrines, including the doctrine of evolution. But it has attempted to show that, granting all the facts of physical science, the universe does still exhibit the divine purpose and its essential beneficence. The very order and symmetry of physical law have been taken as testimony of divine instigation. Mechanism was set in motion by God. In answer to this, it is pointed out by the non-theologian that then God's goodness cannot be maintained. Mechanical processes are indiscriminate in their distribution of goods and evils to the just and the unjust:

> All this Nature does with the most supercilious disregard both of mercy and of justice, emptying her shafts upon the best and noblest, indifferently with the meanest and worst; upon those who are engaged in the highest and worthiest enterprises, and often as the direct consequence of the noblest acts; and it might almost be imagined as a punishment for them. She mows down those on whose existence hangs the well-being of a whole people; perhaps the prospects of the human race for generations to come, with as little compunction as those whose death is a relief to themselves, or a blessing to those under their noxious influence.[1]

Modern theology sometimes grants the apparent reality of the evils which are current in a mechanistic world, but insists that they are making for goods which we with our finite understanding cannot comprehend. Were our intelligence infinite, as is God's, we should see how "somehow good will be the final goal of ill."

Evolution has also been explained as God's method of accomplishing his ends. By some evolutionists, Driesch and Bergson for example, evolution itself, in its steady production of higher types, has been held to be too purposive in character

[1] Mill: *Three Essays on Religion* (Holt), p. 29.

to permit of a purely mechanical explanation. The process of evolution has itself thus come to be taken by some theologians as a clear manifestation of God's beneficent power at work in the universe.

But theology, in the more spiritualistic religions, has always insisted on the primacy of God's goodness. There has been, therefore, in certain theological quarters the tendency to surrender the conception of divine omnipotence in the face of the genuine human evils that are among the fruits of blind mechanical forces. The idea of a finite God who is infinitely good in his intentions, but limited in his powers, has been advocated by such various types of mind as John Stuart Mill, William James, and H. G. Wells. The first mentioned of these writes:

> One only form of belief in the supernatural — one theory respecting the origin and government of the universe — stands wholly clear both of intellectual contradiction and of moral obliquity. It is that which, resigning irrevocably the idea of an omnipotent creator, regards Nature and Life not as the expression throughout of the moral character and purpose of the Deity, but as the product of a struggle between contriving goodness and an intractable material, as was believed by Plato, or a principle of evil as was believed by the Manicheans. A creed like this . . . allows it to be believed that all the mass of evils which exists was undesigned by, and exists not by the appointment of, but in spite of the Being whom we are called upon to worship.[1]

Religion and science. While there have thus been genuine points of conflict between theology and science, these are essentially irrelevant to the religious experience itself. Man is still moved by the same emotions, sensations, needs, and desires which have, from the dawn of history, provoked in him a sense of his relationship with the divine. There comes to nearly all individuals at some time, not without rapture, a sudden awareness of divinity.

It is the terror and beauty of phenomena, the "promise" of the dawn and of the rainbow, the "voice" of the thunder, the "gentle-

[1] Mill: *loc. cit.*, p. 116.

ness" of the summer rain, the "sublimity" of the stars, and not the physical laws which these things follow, by which the religious mind continues to be most impressed; and just as of yore, the devout man tells you that in the solitude of his room or of the fields he still feels the divine presence, that inflowing of help come in reply to his prayers, and that sacrifices to this unseen reality fill him with security and peace.[1]

Modern man, just as his savage ancestor cowering before forces he did not understand, realizes sometimes — some persons realize it always — how comparatively helpless is man amid the magnificent and eternal forces in which his own life is infinitesimally set. Even when one has been educated to the sober prose of science, one feels still the ancient emotions of joy, sorrow, and regret. Birth and death, sowing and harvest, conquest or calamity, as of old, evoke a sympathetic feeling with the movement of cosmic processes. All of these emotions to-day, as in less sophisticated times, may take religious form.

Nor does the universe because we understand it better seem, to many, less worthy of worship. The most thoroughgoing scientific geniuses have felt most deeply the nobility and grandeur of that infinite harmony and order which their own genius has helped to discover. It has been well said the "undevout astronomer is mad." And it is not only the student of the stars who has intimations of divinity. As Professor Keyser puts it: "The cosmic times and spaces of modern science are more impressive and more mysterious than a Mosaic cosmogony or Plato's crystal spheres. Day is just as mysterious as night, the mystery of knowledge is more wonderful and awesome than the darkness of the unknown." [2] It is significant that such men as Newton, Pasteur, and Faraday, giants of modern physical inquiry, were devoutly religious.

It would appear indeed that the objects which men revere are not the subject-matter of science. Physics and chemistry

[1] James: *Varieties of Religious Experience*, p. 498.
[2] Keyser: *Science and Religion*, p. 30.

can tell us what Nature is like; they cannot tell us to what in Nature we shall give our faith and our allegiance. Religion remains, as ever, "loyalty to the highest values of life." Science instead of making the world less awesome has made it more mysterious than ever. Origins and destinies are still unknown. Science tells how; it describes. It does not tell why things occur as they do; or what is the significance of their occurrence. Worship can never be reduced to molecules or atoms. While man lives and wonders, hopes and fears, feels the clear beauty, the infinite mystery, and the eternal significance of things, the religious experience will remain, and men will find objects worthy of their worship.

The church as a social institution. Religion being so crucial a set of social habits, institutions arise for the perpetuation of its traditions, and for the social expression of the religious life. The churches perpetuate the religious tradition in a number of ways. Fixed ecclesiastical systems, recitals and definitions of creeds, the regular and meticulous performance of rites and ceremonies, become powerful instruments for the transmission of religious ideas and standards. Rites frequently performed by men in mass have a deep and moving influence. They have at once all the pressure and prestige of custom, confirmed by the mystery and awe that attends any expression of man's relationship to the divine. The church, moreover, by the mere fact of being an institution, having a hierarchy, an ordered procedure, a definite assignment and division of ecclesiastical labor, becomes thereby an incomparable preserver and transmitter of traditional values.

Churches, ecclesiastical organizations in general, may be said to arise because of the necessity felt by men for intermediaries between themselves and the divine. We have already seen of what vast practical moment in savage life was communication with the gods. Upon the success of such addresses to deity, depended not only the salvation of the soul, but the actual welfare of the body — shelter, harvest, and victory. The gods among many tribes were held to be

meticulous about the forms and ceremonies which men addressed to them. In consequence it became important to have, as it were, experts in the supernatural, men who knew how to win the favor of these watchful powers. The priests were originally identical with medicine men and magicians. They knew the workings of the providential forces. In their hands lay, at least indirectly, the welfare of the tribe. Their principal duties were to administer and give advice as to the worship of the gods. Often it was necessary for them to point out to the lay members of the tribe which gods to worship on special occasions. The priests being accredited with a superior knowledge of the ways of the gods, they were required to influence the wind and rain, to cause good growth, to ensure success in hunting and fishing, to cure illness, to foretell the future, to work harm upon enemies.[1]

There is more than one criterion by which men may be set apart as priests. Sometimes they are those who in a mystic state of ecstasy are supposed to be inspired by the gods. During their trance such men are questioned as to the will of the divine. Sometimes they become renowned through their reputed performance of an occasional miracle. Again, as magical and religious ceremonies become more complicated, there is a deliberate training of an expert class to perform these essential acts. And, whatever be the source of the selection of the priestly class, the immense influence which their functions are regarded as having on the welfare of the tribe causes them to be particularly revered and often feared by the lay members of the tribe. In more civilized and spiritual religions, the priestly or professional ecclesiastical class is no longer regarded as possessed of magical powers by which it can coerce divinity. It is the official administrator of the ceremonies of religion, is especially trained, versed and certificated in doctrine, is empowered to receive confession, fix penance, and the like. It is still an intermediary between

[1] For a detailed discussion see Hastings: *Encyclopædia of Religion and Ethics*, vol. II, pp. 278–335.

man and the divine, although itself not possessing any supernatural powers.

Where ecclesiastical organization is highly developed and has become controlling in the life of a people, it may be one of the most powerful forces in social life. Such, for example, might be said of the Catholic Church during the Middle Ages:

> A life in the Church, for the Church, through the Church; a life which she blessed in mass at morning and sent to peaceful rest by the vesper hymn; a life which she supported by the constantly recurring stimulus of the sacraments, relieving it by confession, purifying it by penance, admonishing it by the presentation of visible objects for contemplation and worship — this was the life which they of the Middle Ages conceived as the rightful life of Man; it was the actual life of many, the ideal of all.[1]

Churches may also come to acquire political functions. The history of the Church is for many centuries the leading factor in the political history of Europe, nor is it only in Christendom that political institutions have been inextricably associated with religion.

Religious institutions may, as pointed out in the case of primitive tribes, acquire educational functions. The initiation ceremonies in Australian tribes have a markedly religious character. In the higher and more modern religions educational functions still persist. The Catholic Church has been regarded as the educator of Europe. Charlemagne's endowment and encouragement of education was largely made effectual through the Church. The grammarians and didactic writers, the poets, the encyclopædists, the teachers whom Charlemagne endowed and gathered about him, the heads of the schools which he founded, were all churchmen. Until very recently in the history of Europe the universities and education in general were nearly all under the domination of the Church. The secularization of primary education in England took place only late in the nineteenth century, and it

[1] Bryce: *Holy Roman Empire*, p. 423.

is not yet a generation since the battle over the secularization of education was waged in France. All religious sects maintain on a smaller or larger scale educational functions. Parochial and convent schools and denominational colleges are contemporary examples.

The social consequences of institutionalized religion. The consequences of institutionalized religion in social development have been very marked. The mere association of large groups in a common faith and a common religious interest has been a considerable factor in their integration. There is to be noted in the first place the common emotional sympathies aroused by the participation of great numbers in identical rites and ceremonies. Any widespread social habit becomes weighted with emotional values for its members. Particularly is this true of religious habits, the mystery and magnificence associated with which deeply intensify their emotional influence. Again religious habits are given a unanimous and high social approval, especially where the prohibitions and commands enforced by religion are conceived intimately to affect the welfare of the tribe. The prophets reiterated to the people of Israel that their calamities were the result of their having ceased to follow in the ways of the Lord. The possession of a common religious history and tradition may also give a people a deepened sense of group solidarity. The national development of the ancient Hebrews was undoubtedly promoted by their sense of being the chosen people, of possessing exclusively the law of Jehovah.

Again religious sanction is given to codes of belief, modes of conduct, and to institutions, thus at once strengthening them and making change difficult. It is not merely customs that are obeyed and disobeyed, but the sacred commands. A premium is put upon the regular and traditional because of the divine sanction associated with them. To violate a prohibition, even a slight one, becomes thus the most terrible sacrilege. Customs that, like the hygienic rules of the Mosaic code, may have started as genuine social utilities are main-

tained because they have become fixed in the religious traditions as enjoined by the Lord. In consequence there may be a Pharisaical insistence on the performance of the letter of the law, long after its practical utility or spiritual significance is forgotten. It is this persistence in the literal fulfillments of religious commands at the expense of the spirit, that the Hebrew prophets so vehemently condemned. Thus proclaims Isaiah:

> To what purpose is the multitude of your sacrifices unto me? saith the Lord: I am full of the burnt offerings of rams, and the fat of fed beasts. . . .
>
> Bring no more vain oblations; incense is an abomination unto me. . . .
>
> Your new moons and your appointed feasts my soul hateth: they are a trouble unto me; I am weary to bear them. . . .
>
> Wash you, make you clean; put away the evil of your doings from before mine eyes; cease to do evil;
>
> Learn to do well; seek judgment, relieve the oppressed, judge the fatherless, plead for the widow.[1]

Institutions and modes of life, even when they are not, strictly speaking, part of the religious tradition proper, are given tremendous sanction and confirmation when they become embodied in the religious tradition. The institution of the family, for example, through the strong religious sanctions and values implied in the marriage ceremony and relationship (especially the marriage sacrament of the Catholic Church), comes to be strongly fortified and entrenched. Change in the form of an institution so hallowed by religion is something more than change; it is sacrilege. Governments and dynasties, again, when they have a religious sanction, when the King rules by "divine right," acquire a strong additional source of persistence and power. The imperial character of the Japanese government to-day, for example, is said to be greatly enhanced in prestige by the widespread popular belief that the Emperor is lineally descended from divinity.

Sometimes religious sanctions have inspired and promoted

[1] Isaiah 1: 11–17.

zeal for social enterprise. The Crusades stand out as classic instances, but in the name of religion men have done more than build cathedrals and go on pilgrimages. In the Middle Ages, bridges and roads were constructed, alms were given, pictures were painted, books illuminated, encyclopædias made, education conducted, all under the auspices and inspiration of the Church. The mediæval universities started as church schools. In our own day, the expansion of the churches in the direction of welfare work and social reform, the use of the church as a community center, are examples of this development. Men have found justification by good works as well as faith.

Intolerance and inquisition. The influence of religious tradition over the minds of its followers has had, among many noble and beautiful consequences, the dark fruits of intolerance, persecution, inquisition, and torture. Part of the bitter narrow-mindedness which has characterized the history of ecclesiastical institutions is not to be attributed specifically to religion. It is rather to be explained by the general uneasiness which the gregarious human creature feels at any deviation from the accustomed. In addition men have felt frequently that any divergence from the divinely ordained would bring destruction upon the whole group. In the Christian tradition there was an additional reason for intolerance: the heretic was willfully losing his own soul, and it was only humane to compel him to come "into the fold, to rescue him from the pains he would otherwise suffer in Hell."

> The profound conviction that those who did not believe in its doctrines would be damned eternally, and that God punishes theological error as if it were the most heinous of crimes, led naturally to persecution. It was a duty to impose on men the only true doctrine, seeing that their own eternal interests were at stake, and to hinder errors from spreading. Heretics were more than ordinary criminals, and the pains that man could inflict on them were as nothing to the tortures awaiting them in hell.[1]

[1] Bury: *History of Freedom of Thought*, pp. 52–53.

In fevered zeal for the Faith began that long hunting and punishment of heresy, which has done so much to darken the history of religion in Western Europe. There were, as in the Albigensian Crusade, wholesale burnings and hangings of men, women, and children.[1] Heresy was hunted out in secret retreats. "It was the foulest of crimes; to prevail against it was to prevail against the legions of Hell." The culmination of intolerance was, of course, the Inquisition. One need not pause to recall its espionage system, its search for the spreaders of false doctrine, its use of any and every witness against the suspect, its granting of indulgences to any one who should bear witness against him, its "relaxing of the criminal to the secular arm," which unfailingly punished him with death. It must be pointed out that in the instance of the Inquisition, just as in the case of all religious persecution, the motives were most frequently of the noblest. "In the Middle Ages and after, men of kindly temper and the purest zeal were absolutely devoid of mercy when heresy was suspected." Nor are intolerance and persecution to be laid exclusively at the door of any one religion. In Protestant countries, in England and Scotland, the persecution and torture of alleged witches is one of the most painful instances of the cruelties into which men can be led by loyalty to their religious convictions. And Mohammedanism vividly taught men how a faith might be spread by fire and sword.

Quietism and consolation — Other-worldliness. Many religions, including Christianity, have emphasized "other-worldliness." This has most frequently taken the form of emphasis on the life to come. This world has been conceived, as it were, as a prelude to eternity. In the Christian world scheme, as most clearly expounded and universally accepted during the Middle Ages, man's chief imperative business was salvation. All else was trivial in comparison with that incomparable eternal bliss which would be the reward of the virtuous, and that unending agony which would be the penalty

[1] *Ibid.*, pp. 56–57.

for the damned. "Salvation was the master Christian motive. The Gospel of Christ was a gospel of salvation unto eternal life. It presented itself in the self-sacrifice of divine love, not without warnings touching its rejection."[1]

Where interest is centered on a world to come, there not infrequently results a loss of interest and discrimination in the goods of earthly life. "For what shall it profit a man if he shall gain the whole world and lose his own soul?" The beauties, goods, and distinctions of this world coalesce into an indiscriminate triviality in comparison with that infinite glory hereafter to be attained. One does not trouble one's self about the furniture of earthly life any more than one would take pains with the beautification of a room in which one happens to be lodged for a night.

Lay not up for yourselves treasures upon earth, where moth and rust doth corrupt, and where thieves break through and steal.

But lay up for yourselves treasures in Heaven, where neither moth nor rust doth corrupt, and where thieves do not break through nor steal.

Though on earth you may live in squalor, poverty, and disease, yet "in my Father's house are many mansions."

Poverty, indeed, became in the Middle Ages one of the vows of monastic orders. In the New Testament it is prescribed, "Blessed are the poor in spirit" and the doctrine was in many cases literally accepted.

If any one of you will know whether he is really poor in spirit, let him consider whether he loves the ordinary consequences and effects of poverty, which are hunger, thirst, cold, fatigue, and the denudation of all conveniences. See if you are glad to wear a worn-out habit full of patches. See if you are glad when something is lacking to your meal, when you are passed by in serving it, when what you receive is distasteful to you, when your cell is out of repair. If you are not glad of these things, if instead of loving them you avoid them, then there is proof that you have not attained the perfection of poverty of spirit.[2]

[1] H. O. Taylor: *Mediæval Mind*, vol. I, p. 61.

[2] Alfonso Rodriguez: *Pratique de la Perfection Chrétienne*, part III, treatise III, chap. VI; quoted in James's *Varieties of Religious Experience*, p. 315.

Contempt for this world's goods, when generalized, promotes an attitude of indifference to the social conditions in which men live. The history of the saints is filled with references to their endurance of pain, ill health, poverty, and disease. And the "world, the flesh, and the devil" are for some types of religious mind all one. For such, to be engaged in social betterment is an irrelevant business, it is to be lost in the world. People's souls must be saved; not their bodies.

Religions, on the other hand, have frequently emphasized man's social duty. In Christianity this is largely a derivative of the highly regarded virtue of Charity. Interest in one's own well-being was a prerequisite for the devout, but interest in the welfare of others was equally enjoined. To help the poor and the needy, the widowed and the fatherless, to bring succor to the oppressed and justice to the downtrodden, have been part of the religion whose Founder taught that all men were the children of their Father in Heaven. The mendicant orders of the Middle Ages were devoted to philanthropic works; and with religious institutions, throughout their history, have been associated works of philanthropy and social welfare. Very recently urban churches in this country have been showing a tendency to reorganize with emphasis on the church as an instrument of social coöperation rather than as an aloof exponent of dogmatic theology. It is the ideal of some liberal theologians to use the churches chiefly as instruments for giving social effectiveness to the religious impulse and at the same time for making social betterment a spiritual enterprise.

CHAPTER XIII

ART AND THE ÆSTHETIC EXPERIENCE

Art *versus* nature. In the Career of Reason man has gradually learned to control the world in which he lives in the interests of his own welfare as he imaginatively contemplated it. Deliberate control has been made necessary because of the fact that man is born into a world which was not made for him, but in which he must, if anywhere, grow; in a world which was not designed to fulfill his desires, but where alone his desires can find fulfillment. Art may thus, in the broadest sense, be set over against Nature. It is the activity by which man realizes ideals. He may realize them practically, as when he builds a house which he has first imagined, or reaps a harvest in anticipation of which he has first sown the seeds. He may realize them imaginatively, as when in color, form, or sound he creates some desiderated beauty out of the crude miscellaneous materials of experience. Art, in the broad sense of control or direction of Nature, arises in the double fact of man's instinctive activities and desires and the inadequacy of the environment as it stands to afford them satisfaction. Because nature is not considerate of his needs, man must himself take forethought, and devise means by which the forces and the materials of Nature may be exploited to his own good. And the realization of this forethought is made possible through the fact that natural conditions do lend themselves to modification. Nature, though indifferent to man's welfare, is yet partly congruous with it. While the wind blows careless of the good or ill it does to him, yet man may learn by means of windmills or sailboats to turn the wind to his own interest. Though the river may flow on forever, oblivious to the men that come and go along its shores, yet the passing generations may transform this undeliberate

flowing into the power that yields them clothing, machinery, and transportation. All civilization is, as Mill says, an exhibition of Art or Contrivance; it is illustrated by

> the junction by bridges of shores which Nature had made separate, the draining of Nature's marshes, the excavation of her wells, the dragging to light of what she has buried at immense depths in the earth; the turning away of her thunderbolts by lightning rods; of her inundations by embankments, of her oceans by breakwaters.[1]

By irrigation man has learned to make the "wilderness blossom as the rose." By railways, telegraphs, and telephones, he has learned to minimize the obstacles that time and space offer to the fulfillment of his desires. By controlling, by means of education and social organization, his own instincts in the light of the purposes he would attain, by studying "the secret processes of Nature," man has learned to make the world a fit habitation for himself. To dig, to plough, to sow, to reap, are instances of the means whereby man has applied intelligent control to his half-friendly, half-hostile environment.

Man's deliberate control of Nature arises thus under the sharp pressure of practical necessity. Man is inherently active, but, as pointed out in an earlier connection, his activity takes coherent and consecutive form primarily under the compulsion of satisfying his physical wants, of finding food, clothing, and shelter. The greater part of human energy, certainly under primitive conditions, is devoted to maintaining a precarious equilibrium among the mysterious and terrifying forces of a half-understood environment. There is not much time for leisure, play, or art, where food is a continuously urgent problem, where one's shelter is likely to be destroyed by storm or wind, where one is threatened incessantly by beasts of prey, and, as primitive man supposed, by capricious supernatural powers. Under such circumstances, life is largely spent in instrumental or imperative pursuits. Action is fixed by necessity. It is controlled with immediate and urgent

[1] Mill: *Three Essays on Religion*, p. 19 (essay on "Nature").

reference to the business of keeping alive. There is scarcely time for the activity of art, which is spontaneous and free.

In civilized life, also, the greater part of human energy must be spent in necessary or instrumental business. Men must, as always, be fed, clothed, and housed, and the fulfillment of these primary human demands absorbs the greater part of the waking hours of the majority of mankind. Our civilization is predominantly industrial; it is devoted almost entirely to the transforming of the world of nature into products for the gratification of the physical wants of men. These wants have, of course, become much complicated and refined: men wish not only to live, but to live commodiously and well. They want not merely a roof over their heads, but a pleasant and comfortable house in which to live. They want not merely something to stave off starvation, but palatable foods. In the satisfaction of these increasingly complicated demands a great diversity of industries arises. With every new want to be fulfilled, there is a new occupation, pursued not for its own sake, but for the sake of the good which it produces. There are industrial leaders, of course, who find in the development and control of the productive energies of thousands of men, in the manipulation of immense natural resources, satisfactions analogous to that of the fine artist. But for most men engaged in the routine operations of industry, the work they do is clearly not pursued on its own account. Industry, viewed in the total context of the activities of civilization, is a practical rather than a fine art. Its ideal is efficiency, which means economy of effort. Its interest is primarily in producing many goods cheaply.

The emergence of the fine arts. In the sharp struggle of man with his environment, those instincts survived which were of practical use. The natural impulses with which a human being is at birth endowed, are chiefly those which enable him to cope successfully and efficiently with his environment. But even in primitive life, so exuberant and resilient is human energy that it is not exhausted by necessary labors.

The plastic arts, for example, began in the practical business of pottery and weaving. The weaver and the potter who have acquired skill and who have a little more vitality than is required for turning out something that is merely useful, turn out something that is also beautiful. The decorations which are made upon primitive pottery exhibit the excess vitality and skill of the virtuoso. Similarly, religious ritual, which, as we have seen, arises in practical commerce with the gods, comes to be in itself cherished and beautiful. The chants which are prescribed invocations of divinity, become songs intrinsically interesting to singer and listener alike; the dance ceases to be merely a necessary religious form and becomes an occasion of beauty and delight. Jane Harrison has shown in detail how ritual arises out of practical need, and art out of ritual.[1] Thus the Greek drama had its beginnings in Greek religion; the incidental beauty of the choruses of the Greek festivals developed into the eventual tragic art of Æschylus, Sophocles, and Euripides. Ceasing to be a practical invocation to the gods it became an artistic enterprise in and for itself. Repeatedly we find in primitive life that activity is not exhausted in agriculture, hunting, and handicraft, or in a desperate commerce with divinity. Harvest becomes a festival, pottery becomes an opportunity for decoration, and prayer, for poetry. Even in primitive life men find the leisure to let their imaginations loiter over these intrinsically lovely episodes in their experience.

The potter may be more interested in making a beautifully moulded and decorated vessel than merely in turning out a thing of use; the maker of baskets may come to "play with his materials," to make baskets not so much for their usefulness as for the possible beauty of their patterns. When this interest in beauty becomes highly developed, and when circumstances permit, the fine arts arise. The crafts come to be practiced as intrinsically interesting employments of the creative imagination. The moulding of miscellaneous mate-

[1] See Jane Harrison: *Ancient Art and Ritual*, especially chap. I.

rials into beautiful forms becomes a beloved habitual practice.

The context in which art appears in primitive life is paralleled in civilized society. The energies of men are still largely consumed in necessary pursuits. Men must, as of old, by the inadequacy of the natural order in which they find themselves, find means by which to live; and, being by nature constituted so that they must live together, they must find ways of living together justly and harmoniously. "Industry," writes Santayana, "merely gives to Nature that form which, if more thoroughly humane, she might already have possessed for our benefit." It is creative in so far as it transforms matter from its crude indifferent state to forms better adapted to human ideals. It makes cotton into cloth, wool into clothing, wheat into flour, leather into shoes, coal into light and power, iron into skyscrapers. It is devoted to annulling the discrepancies between nature and human nature. It turns refractory materials and obdurate forces into commodious goods and useful powers.

But, in the broadest sense, industry is a means to an end. Interesting and attractive it may well become, as when a bookbinder or a printer takes a craftsman's proud delight in the manner in which he performs his work, and in the quality of its product. But the industrial arts, for the most part, serve more ultimate purposes. It is imaginable that Nature might have provided clothing, food, and shelter ready to our hand. It is questionable whether under such circumstances men would out of deliberate choice continue industries which are now made imperative through necessity. The mines and the stockyards are necessary rather than beautiful or intrinsically attractive occupations. But in the world of fact, those things which are necessary to us are not ready to our hand. Our civilization is predominantly industrial, and must be so, if the billion and a half inhabitants of our world are to be maintained by the resources at our command.

Nevertheless despite the absorption of a large proportion of contemporary society in activities pursued not for their own

sakes, but for the goods which are their fruits, there is still, as it were, energy left over. This excess vitality may, as it does for most men, take the form of mere unorganized play or recreation. But not so for those born with a singular gift for realizing in color or form or sound the ideal values which they have imagined. For these "play" is creative production. The fine arts are, in a sense, the play of the race. They are the fruits of such energy as is, through some fortunate accident of temperament or circumstance, not caught up in the routine and mechanics of industry or the trivialities of sport or pleasure. They are human activities, freed from the limitations imposed by the exigencies of practical life, and controlled only by the artist's imagined visions. Creative activity is most explicit and most successful in the fine arts, because in these there are fewer obstacles to the material realization of imagined perfections. "The liberal arts bring to spiritual fruition the matter which either nature or industry has prepared and rendered propitious."

The industrial arts are, as already pointed out, man's transformation of natural resources to ideal uses. In the same way political and social organization are human arts, enterprises, at their best, in the moulding of men's natures to their highest possible realization. But in the world of action, whether political or industrial, there are incomparably greater hindrances to the realization in practice of imagined goods than there are, at least to the gifted, in the fine arts. Every ideal for which men attempt to find fulfillment in the world of action is subject to a thousand accidental deflections of circumstance. Every enterprise involves conflicting wills; the larger the enterprise, the more various and probably the more conflicting the interests involved. Social movements have their courses determined by factors altogether beyond the control of their originators. Statesmen can start wars, but cannot define their eventual fruits. A man may found a political party, and live to see it wander far from the ideal which he had framed. But in the fine arts, to the imaginatively and

technically endowed, the materials are prepared and controllable. In the hands of a master, action does not wander from intent. Language to the poet, for example, is an immediate and responsive instrument; he can mould it precisely to his ideal intention. The enterprise of poetry is less dependent almost than any other undertaking on the accidents of circumstance, outside the poet's initial imaginative resources. In music, even so simple an instrument as a flute can yield perfection of sound. The composer of a symphony can invent a perpetual uncorroded beauty; the sculptor an immortality of irrefutably persuasive form. This explains in part why so many artists, of a reflective turn of mind, are pessimists in practical affairs. The world of action with its perpetual and pitiful frustrations, failures, and compromises, seems incomparably poor, paltry, and sordid, in comparison with the perfection that is attainable in art.

> Haunting foreshadowings of the temple appear in the realm of imagination, in music, in architecture, in the untroubled kingdom of reason, and in the golden sunset magic of lyrics, where beauty shines and glows, remote from the touch of sorrow, remote from the fear of change, remote from the failures and disenchantment of the world of fact. In the contemplation of these things the vision of heaven will shape itself in our hearts, giving at once a touchstone to judge the world about us, and an inspiration by which to fashion to our needs whatever is capable of serving as a stone in the sacred temple.[1]

The creative artist gives such form to the miscellaneous materials at his disposal that they give satisfaction not only to the senses or the intellect, but to the imagination. What constitute some of the chief elements in the æsthetic experience, we shall presently examine. It must first be pointed out that in general in the fine arts creative genius has found ways of imaginatively attaining perfections not usually accorded in the experiences of the senses, in the life of society, or in the life of the mind.

The region called imagination has pleasures more airy and lumi-

[1] Bertrand Russell: *Philosophical Essays*, pp. 65–66.

nous than those of sense, more massive and rapturous than those of intelligence. The values inherent in imagination, in instant intuition, in sense endowed with form, are called æsthetic values; they are found mainly in nature and in living beings, but also in man's artificial works, in images evoked by language, and in the realm of sound.[1]

The painter imagines and seeks to realize hues and intensities of color more satisfying and more suggestive than those commonly experienced in nature, save in the occasional grace of sunset on a mountain lake, or the miracle of moonlight on the ocean. The artist takes his hints from nature, but clothes the suggestions of sense with the values and motives which exist only in his own mind and imagination. A Turner sunset is, as Oscar Wilde points out, in a sense incomparably superior to one provided by nature. It not only gives the beautiful sensations to be had in a landscape suffused with the sunset glow; it infuses into this experience the passionate and penetrating insight of a genius. The artist, to an extent, imitates nature. But, if that were all he did, he would be no more than a photographer. He pictures nature, but gives it "tint and melody and breath"; he gives it a value and significance derived from his own imaginative vision. The musician combines sounds more significant, ordered, and rhythmical than those miscellaneous noises which, in ordinary experience, beat indifferently or painfully upon our ears. The poet selects words whose specific music, rhythmical combinations, and lyrical context produce a something more evocative, compelling, and euphonic than the casual and raucous instrument of communication which constitutes ordinary speech.

Not only do poets give imaginative and ideal extensions to sense experience; they do as much with and for social life. In the dreaming of Utopias, in the building of the Perfect City, men have found compensations for the imperfect cities which have been their experiences on earth. They build

[1] Santayana: *Reason in Art*, p. 15.

themselves in imagination a world where all injustices are erased, where beauty is perennial, where truth, courage, kindliness, and merriment are the pervasive colors of life. In the activity of creative art, man's imagination has reached out beyond the confines of nature and of history, and built itself, in marble and in music, in lyrics and in legends, hints of that enchanting possible, of which the impoverished actual gives tentative and tenuous hints.

In some men sensitivity to the imaginative possibilities of the materials of Nature is so high, that they can find satisfactory activity nowhere else than in one or another of the fine arts. These are the poets, the musicians, and the sculptors, who seek to give realization in the arts in the technique of which they are especially gifted, to that imagined beauty by the intimate experience of which they live. In one way or another the creative artist seeks to give form and dimension to

> "The light that never was on sea or land,
> The consecration and the poet's dream."

This creative impulse may find its realization, as already pointed out, in industry, though, with the highly routine character of most men's occupations in present-day industrial life, there is not much opportunity for imaginative activity. That both work and happiness would be promoted by the encouragement of the craftsman ideal goes without saying. Whether or not it is possible to utilize the creative impulses in the processes of industry as now organized, there are instances where the joy of craftsmanship may be exploited both for the happiness of the worker and the good of the work. The William Morris ideal of the artist-worker may be hard to attain, but it is none the less desirable, both for the sake of the worker and his work.

In science the uses of the imagination have been frequently commented on, not least by scientists. The patient collection of facts, the digging and measurement and inquiry that characterize so much of scientific investigation

are not the whole of it. Inference, the forming of a generalization, is frequently described "as a leap from the known to the unknown," and this discovery of a binding principle that brings together a wide variety of disconnected facts is not unlike the process of the creative artist. The same unconscious method by which a poet hits upon an appropriate epithet, a musician upon a melody, a painter upon an effect of color or line is displayed in that sudden vivid flash of insight by which a scientist sees a mass of facts that have long seemed bafflingly contradictory, gathered up under a single luminous law. In his famous essay on "The Scientific Uses of the Imagination," Tyndall writes:

> We are gifted with the power of Imagination, . . . and by this power we can lighten the darkness which surrounds the world of the senses. There are tories even in science who regard imagination as a faculty to be feared and avoided rather than employed. They had observed its action in weak vessels and were unduly impressed by its disasters. But they might with equal justice point to exploded boilers as an argument against the use of steam. Bounded and conditioned by coöperant Reason, imagination becomes the mightiest instrument of the physical discoverer. Newton's passage from a falling apple to a falling moon was, at the outset, a leap of the imagination. When William Thomson tries to place the ultimate particles of matter between his compass points, and to apply to them a scale of millimetres, he is powerfully aided by this faculty. And in much that has been recently said about protoplasm and life, we have the outgoings of the imagination guided and controlled by the known analogies of science. In fact, without this power, our knowledge of Nature would be a mere tabulation of coexistences and sequences. We should still believe in the succession of day and night, of summer and winter; but the soul of Force would be dislodged from our universe; causal relations would disappear, and with them that science which is now binding the parts of nature into an organic whole.[1]

As we shall presently see, this imaginative leap is guarded and controlled, so that no flash of insight, however attractive, is uncritically accepted. But the origin of every eventually

[1] Tyndall: *Fragments of Science*, pp. 130–31.

accepted hypothesis lies in the upshoot of irresponsible fancy, differing not at all from the images in the mind of a poet or painter or the melodies that unpredictably occur to a musician.

The æsthetic experience. Art is, on its creative side, as we have seen, the control of Nature in the practical or imaginative realization of ideals. The industrial arts are pursued out of necessity, because man must find himself ways of living in a world which he must inhabit, though it is not *a prior* arranged for his habitation. The fine arts are pursued as ends in themselves.[1] The genuinely gifted sing, paint, write poetry, apart from fame and reward, for the sheer pleasure of creation. But the products of these creative activities themselves become satisfactions on a par with other natural goods. The objects of art — poems, paintings, statues, symphonies — are themselves prized and sought after. They afford satisfaction to that large number of persons who are sensitive to the beautiful without having a gift for its creation.

Æsthetic appreciation is indeed shared by all men, and is called out by other objects than paintings or poems. There is hardly anything men do which is not affected by what has been called "an irrelevant access of æsthetic feeling." We saw in another connection how our estimates of persons and situations are qualified by love and hate, sympathy and revulsion. In the same way all our experiences have an æsthetic coloring.

[1] Many industrial processes exhibit elements of the fine arts. This is the case whenever there is opportunity for the worker to feel, and to have some ground for the feeling, that he is not merely turning out a product, but turning out a well-made or a beautiful one, to which his own skill is contributing. The makers of fine books or bindings or furniture, of fine embroidery and the like, are examples. But such conditions occur chiefly in the so-called luxury trades. There is very little opportunity for the display of creative talent in quantity manufacture.

On the other hand, every fine art involves some elements of merely technical skill or craftsmanship, which is important in achieving an imaginative result, but is the skill of the mechanic rather than the vision of the artist. In surveying the finished product of art as it appears in a painting by a Turner or a Cezanne, we may forget the "dust and ointment of the calling," but it is none the less there. The drudgery of art, the practicing of scales, the mixing of colors, the rehearsing of plays, are, as it were, the necessary preliminary industry in art.

It may be nothing more than the curious jubilance and vivacity, the thrill and tingle of the blood that comes upon a crisp autumn day. It may be, as Mill pointed out, the largeness of thought and vision promoted by habitually working in a spacious and dignified room. Æsthetic influences are always playing upon us; they determine not only our tastes in the decoration of our houses, our choices of places to walk and to eat, but even such seemingly remote and abstract matters as a scientific theory or a philosophy of life. Even the industrial ideal of efficiency has, "with its suggestion of Dutch neatness and cleanliness," order and symmetry, an æsthetic flavor. Similarly is there an appeal to our æsthetic sensibilities in the grouping of a wide variety of facts under sweeping inclusive and simple generalizations. There is, as has often been pointed out, scarcely anything to choose from as regards the relative plausibility of the Copernican over the Ptolemaic system. The former we choose largely because of its greater symmetry and simplicity in accounting for the facts. Even a world view may be chosen on account of its artistic appeal. One feels moved imaginatively, even if one disagrees with the logic of those philosophies which see reality as one luminously transparent conscious whole, in which every experience is delicately reticulated with every other, where discord and division are obliterated, and the multiple variety of mundane facts are gathered up into the symmetrical unity of the eternal.

Appreciation *versus* action. Every human experience has thus its particular and curious æsthetic flavor, as an inevitable though undetected obligato. Æsthetic values enter into and qualify our estimates of persons and situations, and help to determine that general sympathy or revulsion, that love or hate for people, institutions, or ideas, which make the pervasive atmosphere of all human action. But in the world of action, we cannot emphasize these irrelevant æsthetic feelings. The appreciative and the practical moods are sharply contrasted. In the latter we are interested in results, and insist

on the exclusion of all considerations that do not bear on their accomplishment. The appreciative or æsthetic mood is detached; it is interested not to act, but to pause and consider; it does not want to use the present as a point of departure. It wants to bask in the present perfection of color, word, or sound. The practical man is interested in a present situation for what can be done with it; he wants to know, in the vernacular, "What comes next?" "Where do we go from here?" The appreciator wishes to remain in the lovely interlude of perfection which he experiences in music, poetry, or painting.

The æsthetic mood is obviously at a discount in the world of action. To bask in the charm of a present situation, to linger and loiter, as it were, in the sun of beauty, is to accomplish nothing, to interrupt action. It is precisely for this reason that persons with extremely high æsthetic sensibilities are at such a discount in practical life. They are too easily dissolved in appreciation. They are too much absorbed, for practical efficiency, in the tragic, the whimsical, the beautiful, or the comic aspects of men and affairs. The same sensitivity to the innuendoes and colors of life that enable some of such men to give an exquisite and various portraiture of experience, incapacitates them for action. The practical man must not observe anything irrelevant to his immediate business. He must not be dissolved, at every random provocation, into ecstacy, laughter, or sorrow. There is too much to be done in business, government, mechanics, and the laboratory, to allow one's attention to wander dreamingly over the tragic, the beautiful, the pathetic, the comic, and the grotesque qualities of the day's work. To take an extreme case, it would, as Jane Harrison observes, be a monstrosity, when our friend was drowning, to note with lingering appreciation the fluent white curve of his arm in the glimmering waters of the late afternoon. The man to whom every event is flooded with imaginative possibilities and emotional suggestions is a useless or a dangerous character in situations where it is essential to discriminate the immediate and important bear-

ings of facts. We cannot select an expert accountant on the basis of a pleasant smile, nor a chauffeur for his sense of humor.

But while, in the larger part of the lives of most men, observation of facts is controlled with reference to their practical bearings, observation may sometimes take place for its own sake. The glory of a sunset is not commonly prized for any good that may come of it; nobody but a general on a campaign or a fire warden looks out from a mountain peak upon the valley below for reasons other than the pleasure of the beholding. In the case of persons, also, we are not always interested in them for their uses; we are sometimes delighted with them in themselves. We pause to watch merry or quaint children, experts at tennis, beautiful faces, for their own sakes.

While even in nature and in social experience, we thus sometimes note specifically æsthetic values, the objects of fine art have no other justification than the immediate satisfactions they produce in their beholder. Those intrinsic pleasures which go by the general name of beauty are various and complicated. Our joy may be in the sheer delight of the senses, as in the hearing of a singularly lucid and sustained note of a clarinet, a flute, a voice, or a violin. It may be in the appreciation of form, as in the case of the symmetry of a temple, an arch, or an altar. It may be in the simultaneous stirring of the senses, the imagination, and the intellect, by the presentation of an idea suffused with music and emotion, as in the case of an ode by Wordsworth or a sonnet by Milton.

In all these instances we are not interested in anything beyond the experience itself. The objects of the fine arts are not drafts on the future, anticipations of future satisfactions eventually to be cashed in. They are immediate and intrinsic goods, absolute fulfillments. They are not signals to action; they are releases from it. A painting, a poem, a symphony, do not precipitate movement or change. They invite a restful absorption. It was this that made Schopenhauer regard art

as a rest from reality. During these interludes, at least, we live amid perfections, and are content there to move and have our being.

Sense satisfaction. Appreciation of the arts begins in the senses. Sight and sound, these are unquestionably the chief avenues by which the imagination is stirred.[1]

In the words of Santayana:

> For if nothing not once in sense is to be found in the intellect, much less is such a thing to be found in the imagination. If the cedars of Lebanon did not spread a grateful shade, or the winds rustle through the maze of their branches, if Lebanon had never been beautiful to sense, it would not now be a fit or poetic subject of allusion. . . . Nor would Samarcand be anything but for the mystery of the desert, and the picturesqueness of caravans, nor would an argosy be poetic if the sea had no voices and no foam, the winds and oars no resistance, and the rudder and taut sheets no pull. From these real sensations imagination draws its life, and suggestion its power.[2]

Satisfaction in sounds arises from the regular intervals of the vibrations of the air by which it is produced. The rapidity of these regular beats determines the pitch. But sounds also differ in *timbre* or quality, depending on the number of overtones which occur in different modes of production. This explains why a note on the scale played on the piano, differs from the same note played on the 'cello or the organ. From these fundamental sensuous elements of sound, elaborate symphonic compositions may be built up, but they remain primary nevertheless. Unless the sensuous elements of sound were themselves pleasing it is difficult to imagine that a musical composition could be. Music would then be like an orchestra whose members played in unison, but whose violins were raucous and whose trumpets hoarse.

Color again illustrates the æsthetic satisfactions that are found in certain kinds of sense stimulation, apart from the

[1] The so-called lower senses are not regarded as yielding æsthetic values. Smell, taste, and touch are not generally, certainly in Occidental art, made much of.

[2] Santayana: *Sense of Beauty*, p. 68.

form they are given or the emotions or ideas they express. The elements of color, *as* color, may be reduced to three simple elements: First may be noted *hue*, as yellow or blue; second, *value* (or *notan*) dark or light red; and third *intensity* (or brightness to grayness), as vivid blue or dull blue. Specific vivid æsthetic combinations and variations are made possible by variations or combinations of these three elements of color. If a color scheme is displeasing, the fault may be in the wrong selection of hues, in weak values, in ill-matched intensities or all three.

Dutch tiles, Japanese prints and blue towels, Abruzzi towels, American blue quilts, etc., are examples of harmony built up with several values of one hue.

With two hues innumerable variations are possible. Japanese prints of the "red and green" period are compositions in light yellow-red, middle green, black, and white. . . .

Color varies not only in hue and value [*notan*] but in intensity — ranging from bright to gray. Every painter knows that a brilliant bit of color, set in grayer tones of the same or neighboring hues, will illuminate the whole group — a distinguished and elusive harmony. The fire opal has a single point of intense scarlet, melting into pearl; the clear evening sky is like this when from the sunken sun the red-orange light grades away through yellow and green to steel gray.[1]

These variations in hue, value, and intensity of color afford specific æsthetic satisfactions. The blueness of the sky is its specific beauty; the greenness of foliage in springtime is its characteristic and quite essential charm. Apart from anything else, sensations themselves afford satisfaction or the reverse. A loud color, a strident or a shrill sound may cause a genuine revulsion of feeling. A soft hue or a pellucid note may be an intrinsic pleasure, though a formless one, and one expressive of no meaning at all.

Form. While the imagination is stirred most directly by the immediate material beauty, by the satisfaction of the senses, beauty of form is an important element in the enhancement of appreciation. In the plastic arts and in music,

[1] Dow: *Composition*, p. 109.

it is, next to the immediate appeal of the sensuous elements involved, the chief ingredient in the effects produced. And even in those arts which are notable for their expressive values, poetry, fiction, drama and painting, the appeal of form, as in the plot of a drama, or the structure of an ode or a sonnet is still very high. Certain dispositions of line and color in painting; of harmony and counterpoint in music; rhythm, refrain, and recurrence in poetry; symmetry and balance in sculpture; all have their specific appeal, apart from the materials used or the emotions or ideas expressed. Certain harmonic relations are interesting in music apart from the particular range of notes employed, or the particular melody upon which variations are made. The pattern of a tapestry may be interesting, apart from the color combinations involved. The structure of a ballade or a sonnet may be beautiful, apart from the melody of the words or the persuasiveness of the emotion or idea. Out of the factors which enter into the appreciation of form certain elements stand out.

There is, in the first place, *symmetry*, the charm of which lies partly in recognition and rhythm. "When the eye runs over a façade, and finds the objects that attract it at equal intervals, an expectation, like the anticipation of an inevitable note or requisite word, arises in the mind, and its nonsatisfaction involves a shock."[1]

Similarly, form given to material brings a variety of details under a comprehensive unity, enabling us to have at once the stimulation of diversity and the clarification of a guiding principle. We cherish sensations in themselves, when they consist of elements like limpidness of color and lucidity of sound. But too much miscellany of sensation is disquieting; it has an effect analogous to noise. A baby or a barbarian may delight in loud heterogeneity and vivid confusion, but extravagance of sensation does not constitute an æsthetic experience.

The discovery of the one in the many, the immediate appre-

[1] Santayana: *The Sense of Beauty*, p. 92.

hension of the fluent tracing of a pattern, a form, or a structure, is intrinsically delightful. The pattern of a tapestry design is as striking and suggestive as the colors themselves. When musical taste has passed from a sentimental intoxication with the sensuous beauty of the sounds themselves, the beauty we admire is primarily beauty of form or structure. The musical connoisseur likes to trace the recurrence of a theme in a symphony, its deviations and disappearances, its distribution in the various choirs of wood-wind, brass, and strings, its interweaving with other themes, its resilient, surprising, and apposite emergences, its pervasive penetration of the total scheme.

The æsthetic experience, indeed, as specifically æsthetic, rather than merely sensuous or intellectual, is, it might be said, almost wholly a matter of form. It is the artist's function, as it is occasionally his achievement, to give satisfying, determinate forms to the indeterminate and miscellaneous materials at his command. Formlessness is for the creator of beauty the unpardonable sin. To give clarity and coherence to the vague ambiguous scintillations of sound, to chisel a specific perfection out of the indefinite inviting possibilities of marble, to form precise and consecutive suggestions out of the random and uncertain music of words, is to achieve, in so far, success in art. Nor does form mean formality. Experience is so various and fertile, and so far outruns the types under which human invention and imagination can apprehend it, that inexhaustible novelty is possible. Novelty, on the other hand, does not mean formlessness. The artist must, if he is to be successful, always remain something of an artisan. However beautiful his vision, he must have sufficient command of the technical resources to his craft to give a specific and determinate embodiment to his ideal.

Every one has haunting premonitions of beauty; it is the business of the artist to give realization in form to the hints of the beautiful which are present in matter as we meet it in experience, and to the imaginative longings which they provoke.

In which forms different individuals will find satisfaction depends on all the circumstances which go to make one individual different from another. There cannot be in the case of art, any more than in any other experience, absolute standards. We can be pleased only with those arrangements of sound or color to which our sensibilities have early been educated. Even the most catholic of tastes becomes restricted in the course of education. To Western ears, there is at first no music at all in Chinese music, and Beethoven would appear to the Chinese as barbarous as their compositions appear to us.

But while in a wide sense, conformity to the average determines or limits our possible appreciation of the beautiful, within these limits certain elements are intrinsically more pleasing than others. Those elements of experience, in the first place, more readily acquire æsthetic values, which in themselves strikingly impress the senses. Thus tallness in a man, because it is in the first place striking, becomes readily incorporated into our standard of the beautiful. And all elements in themselves beautiful, the human eye, the curve of the arm, the wave of the hair, come to be emphasized. These outstanding elements may themselves become conventionalized and standardized, so that objects of art which conform to them are insured thereby of a certain degree of recognition as beautiful. Too close a conformity produces monotonous formalities, cloying classicisms. Too wide a divergence results in shock and unpleasantness. The history of all the arts, however, is full of instances of how the taste of a people can be educated to new forms. Ruskin had to educate the English people to an appreciation of Turner. The poets of the Romantic period were condemned by the critics brought up on the rigid classic models. The so-called Romantic movements in the arts are, at their best, departures from old forms, not into formlessness, but into new, various, and more fruitful forms. Romanticism at its worst dissolves into mere formlessness and inarticulate ecstacies. Infinite variety of forms the world of experience may be made to wear, but sensations,

emotions, and ideas must be given some form, if they are to pass from a fruitless yearning after beauty into its positive incarnation in objects of art.

All forms have their characteristic emotional effects, as have all materials, even apart from the emotions or ideas they express. The glitter of gold and the sparkle of diamonds, the strength of marble, the sturdiness of oak — we hardly can think of these materials without thinking of the associations which go with them. Similarly the symmetry of the colonnades of a temple, the multiplicity and variety of Gothic architecture, even so simple a form as a circle, provoke a great or slight characteristic emotional reaction. Likewise, a staccato or a fluent rhythm in music, a march, or a dance movement, have, even apart from their unconscious or intentional expressiveness, specific emotional values. In literature, also, where the value of the words themselves might be expected to give place entirely to the emotions or ideas of which they are the expressive instruments, poems may themselves, by their form and music, be provocative of specific emotional effects.

> " . . . And over them the sea wind sang,
> Shrill, chill, with flakes of foam. He, stepping down
> By zigzag paths and juts of pointed rock,
> Came on the shining levels of the lake.
>
> Dry clashed his harness in the icy caves,
> And barren chasms, and all to left and right,
> The bare black cliff clanged round him, as he based
> His feet on juts of slippery crag that rang,
> Sharp-smitten with the dint of armed heels —
> And on a sudden, lo! the level lake,
> And the long glories of the winter moon." [1]

Here the effect lies partly in the form, but more especially in the *timbre* and reverberation of the words themselves. In other cases, it is the form that is the chief ingredient in the effect produced. In Alfred Noyes's " The Barrel Organ," apart from the meaning, it is the rhythmic form that is of chief æsthetic value:

[1] From Tennyson's *Morte d'Arthur*.

"Come down to Kew in lilac time, in lilac time, in lilac time,
Come down to Kew in lilac time, it is n't far from London,
And you shall wander hand-in-hand with love in summer's wonderland.
Come down to Kew in lilac time; it is n't far from London.

"The cherry trees are seas of bloom and soft perfume and sweet perfume.
The cherry trees are seas of bloom (and oh, so near to London!)
And there they say, when dawn is high, and all the world's a blaze of sky,
The cuckoo, though he's very shy, will sing a song for London."

Apart from all considerations of meaning, set the easy fluent grace of this lyric over against the march and majesty of the "Battle Hymn of the Republic."

"Mine eyes have seen the glory of the coming of the Lord;
He is trampling out the vintage where the grapes of wrath are stored;
He hath loosed the fateful lightning of His terrible swift sword;
His truth is marching on.

"He has sounded forth the trumpet that shall never call retreat;
He is sifting out the hearts of men before His judgment-seat;
Oh, be swift, my soul, to answer Him! be jubilant, my feet!
Our God is marching on."

Expression. The objects of art, as we have seen, are interesting and attractive in themselves, for the material of which they are formed, and for the form which the artist has given them. But they are interesting in another and possibly as important a way: they are instruments of expression. That is, a painting is something more than an intrinsically interesting disposition of line and color, a statue something more than an exquisite or sublime chiseling of marble, a poem more than a rhythmic combination of the music of words. All of these are expressive. Something in their form is associated with something in our past experience. Thus, as James somewhere suggests, "a bare figure by Michelangelo, with unduly flexed joints, may come somehow to suggest the moral tragedy of life." Something in the face of an old man painted by Rembrandt may recall to us a similar outward evidence of inner seriousness, wistfulness, and resignation which we have ourselves beheld in living people. And we clearly value the poems of a Wordsworth, a Milton, a Mat-

thew Arnold, not solely for the magnificent form and music of their words, but also for the sober beauty of their meaning. We may come to appreciate even the highly immediate sensuous and formal pleasure of music for the reverie or rapture into which by suggestion it throws us. "Expression may, therefore, make beautiful by suggestion, things in themselves indifferent, or it may come to heighten the beauty which they already possess."

The objects of art may be appreciated chiefly either for their material and form, or for the values which they express. In some cases the actual object may be beautiful; sometimes the beauty may lie almost wholly in the image, emotion, or idea evoked. "Home, Sweet Home," for example, may be plausibly held to win admiration rather for the sentimental associations which it evokes in the singer or hearer than for its verbal or melodic beauty. The enjoyment which people without any musical gifts, out on a camping or canoeing trip, experience from singing a rather cheap and frayed repertory is obviously for sentimental rather than for æsthetic satisfaction. Similarly, we may cherish the mementos of a lost friend or child, not for their intrinsic worth, but for the tenderness of the memories they arouse. The situation is delicately described in Eugene Field's "Little Boy Blue":

> "The little toy dog is covered with dust,
> But sturdy and staunch he stands,
> And the little toy soldier is red with rust,
> And his musket moulds in his hands.
> Time was when the little toy dog was new,
> And the soldier was passing fair,
> And that was the time when our Little Boy Blue
> Kissed them and put them there."

Some objects of art may indeed become beautiful almost completely through their expressiveness. There are certain poets whose music is raucous and who make little appeal through clarity of form. These survive almost completely by virtue of the persistent strength and enduring sublimity of the ideas which they express. Much of Whitman may be put in

this class, and also much of Browning. Similarly a sculptor may not captivate us by the fluent beauty of his marble, but by the power and passion which his crude mighty figures express. In such cases we may even come to regard what, from a purely formal point of view, is unlovely, as a thing of the most extreme beauty. Even the roughness in such direct revelations of strength, may come to be regarded as elements of the beautiful. And where massiveness of effect does not suffice to retrieve a work of art from its essential crudities, we may still come to accept it as beautiful, as it were, in intention, and for what comes to be regarded as its essence, namely, the idea or emotion it expresses. We forgive the imperfections of form as we forgive the stammerings and stutterings of persons whose broken sayings are yet full of wisdom.

Usually even where the object, emotion, or idea expressed is beautiful, we demand certain formal and material elements of beauty. A telegram may convey the very apex of felicity, yet be not at all felicitous in its form or in the music of its words. If in such cases, we speak of beauty, the term is altogether metaphorical and imputed; we are using it in the same analogical sense as when we speak of a "beautiful operation" or a "beautiful deed"; it is a moral rather than an æsthetic term. We may find the letter of a friend expressive of the gentleness, fidelity, and charm that have endeared him to us, but unless these have attained sufficiently clear and explicit form and determinate unmistakable music, the letter will have a meaningful beauty only in the light of the peculiar relation existing between us and the writer. From an impartial æsthetic point of view, the epistle can only by affectionate exaggeration be called beautiful.

But the arts, through their beauty of form, may present pleasingly objects, emotions, ideas, not in themselves beautiful or pleasing. The clearest case of this kind is tragedy, where we may enjoy at arm's length and through the medium of art, experiences which would in the near actualities of life be only unmitigated horror. Refracted through the medium of

poetry and drama, they may appear beautiful pervasively and long.

We are enabled through the arts to survey sympathetically universal emotions, those by which our own lives have been touched, or to which they are liable; we are enabled to survey bitterness and frustration calmly because they are set in a perspective, a beautiful perspective, in which they shine out clear and persuasive, purified of that bitter personal tang which makes sorrow in real life so different in tone from the beauty with which in tragedy it is halved. Any sensation, as Max Eastman justly remarks in his "Enjoyment of Poetry," may, if sufficiently mild, become pleasing. And there is hardly any human action or experience, however terrible, which cannot in the hands of a master be made appealing and sublime in its emotional effect.

> The beauty of Tragedy does but make visible a quality which, in more or less obvious shapes, is present always and everywhere in life. In the spectacle of death, in the endurance of intolerable pain, and in the irrevocableness of a vanished past, there is a sacredness, an overpowering awe, a feeling of the vastness, the depth, the inexhaustible mystery of existence, in which, as by some strange marriage of pain, the sufferer is bound to the world by bonds of sorrow. In these moments of insight we lose all eagerness of temporary desire, all struggling and striving for petty ends, all care for the little trivial things that, to a superficial view, make up the common life of day by day; we see, surrounding the narrow raft, illumined by the flickering light of human comradeship, the dark ocean on whose rolling waves we toss for a brief hour.[1]

But emotions and experiences that in real life are displeasing can be made pleasing in art chiefly by virtue of the qualities of material and form already discussed. The disappointment, disillusion, or terror which tragedy so vividly reveals is made tolerable chiefly through the intrinsic beauty of the vehicle in which it is set forth. The high and breathless beauty of rhythm, the verve, the mystery, and music with which evils are set forth, may make them not only tolerable but tender

[1] Bertrand Russell: *Philosophical Essays*, pp. 67–68.

and appealing. What would be as immediate experience altogether heartrending, for example the torturing remorse of a Macbeth, is made splendid and moving in the incisive majesty and penetration of his monologues. At the end of Hamlet, the utter wreck, unreason, and confusion is made bearable and beautiful by the tender finality of Hamlet's dying words to Horatio:

> "Absent thee from felicity awhile
> And in this harsh world draw thy breath in pain,
> To tell my story."

Greek tragedy had the additional accouterments of a chorus, of music, of production in a vast amphitheater to give an atmosphere of outward grandeur to the glory of its intent. Tragedy often relieves the net horror which is its burden by the pomp and circumstance of the associations it suggests:

> We have palaces for our scene, rank, beauty, and virtues in our heroes, nobility in their passions and in their fate, and altogether a sort of glorification of life without which tragedy would lose both in depth of pathos — since things so precious are destroyed — and in subtlety of charm, since things so precious are manifested.[1]

Tragedy still more subtly attains the beauty of expressiveness by making the very evils and confusions and terrors it presents somehow the exemplifications of a serene eternal order. The function of the chorus in Greek tragedy was indeed chiefly to indicate in solemn strophe and antistrophe the ordered and harmonious verities of which these particular follies and frustrations were so tender and terrible an illustration. They catch up the present and particular evil into the calm and splendid interplay of cosmic forces. Thus at the end of Euripides's play *Medea,* when the heroine has slain the children she has borne to Jason and in her fury refuses to let him gather up their dead bodies, when Jason in utter inconsolable despair, casts himself upon the earth, out of all this wrack and torture the chorus raises the audience into a

[1] Santayana: *Sense of Beauty,* p. 228.

contemplation of the ordered eternity by which these things come to be. It sings:

"Great treasure halls hath Zeus in Heaven,
From whence to man strange dooms be given,
Past hope or fear;
And the end men looked for cometh not,
And a path is there where no man thought:
So hath it fallen here." [1]

Art as vicarious experience. The drama, art, and painting are, in general, ways by which we can vicariously experience the emotions of others. All of the expressive arts are made possible by the fundamental psychological fact that human beings give certain instinctive and habitual signs of emotion and instinctively respond to them. In consequence, through art experience may be immeasurably broadened, deepened, and mellowed. Through the medium of art, modes of life long past away can leave their imperishable and living mementos. Dante opens to the citizen of the twentieth century the mind and imagination of the Middle Ages. A Grecian urn can arouse, at least to a Keats, the whole stilled magic of the Greek spirit. And not only can we live through the life and emotion of times long dead, but the fiction and drama and poetry of our own day permit us to enter into realms of experience which in extent and variety would not be possible to one man. Indeed, the possibility of vicariously enlarging experience is one of the chief appeals of art. We cannot all be rovers, but we can have in reading Masefield a pungent sense of romantic open spaces, the salt winds, the perilous motion or the broad calm of the sea. We feel something of the same urgency as that of the author when we read:

"I must go down to the seas again, the lonely sea and the sky,
And all I ask is a tall ship and a star to steer her by,
And the wheel's kick and the wind's song and the white sail's shaking,
And a gray mist on the sea's face and a gray dawn breaking." [2]

Art opens up wide avenues of possibility; it releases us from the limitations to which a particular mode of life, an acci-

[1] Euripides: *Medea* (Gilbert Murray translation). [2] Masefield: *Sea-Fever.*

dental niche in a business or profession has committed us. It enables us vividly to experience and sympathetically to appreciate the lives which are led by other men, and in which something in our own personalities could have found fulfillment.

While the objects of art thus broaden our experience by their precise and contagious communication of emotion, they may also express ideas. Thus a play may have a message, a poem a vision, a painting an allegory. Art is both at an advantage and at a disadvantage in the communication of ideas. Ideas, if they are to be accurately conveyed, should be devoid of emotional flourish, and presented with telegraphic directness and precision. They should have the clarity of formulas, rather than the distracting array and atmosphere of form. But ideas presented in the persuasive garb of beauty, gain in their hold over men what they lose in precision. Thus an eloquent orator, a touching letter, a vivid poem, may do more than volumes of the most definitive and convincing logic to insinuate an idea into men's minds. Compare in effectiveness the most thoroughgoing treatise on the status of the agricultural laborer with the stirring momentum of Edwin Markham's "The Man With the Hoe":

"Bowed by the weight of centuries he leans
Upon his hoe and gazes on the ground,
The emptiness of ages in his face,
And on his back the burden of the world.
Who made him dead to rapture and despair,
A thing that grieves not, and that never hopes,
Stolid and stunned, a brother to the ox?
Who loosened and let down this brutal jaw?
Whose was the hand that slanted back this brow?
Whose breath blew out the light within this brain?

"Is this the Thing the Lord God made and gave
To have dominion over sea and land;
To trace the stars and search the heavens for power,
To feel the passion of Eternity?
Is this the Dream he dreamed who shaped the suns,
And marked their ways upon the ancient deep?
Down all the stretch of Hell to its last gulf

> There is no shape more terrible than this —
> More tongued with censure of the world's blind greed —
> More filled with signs and portents for the soul —
> More fraught with menace to the universe."

An idea clothed with such music and passion is an incomparably effective means of arousing a response. It is this which makes art so valuable an instrument of propaganda. People will respond actively to ideas set forth with fervor by a Tolstoy or an Ibsen who would be left cold by the flat and erudite accuracy of a volume on economics. And the confirmed Platonist is made so perhaps less by the convincingness of Plato's logic, than by the inevitable and irrefutable grace of his dramatic art.

There is, for certain persons educated in the arts, a satisfaction that is neither sensuous nor emotional, but intellectual. These come to discriminate form with the abstract though warm interest of the expert. The well-informed concert-goer begins to appreciate beauties hidden to the uninitiate. He notes with eager anticipation the technical genius of a composition as it unfolds, admiring the craft and skill as well as the vision of the artist. In extreme cases this may, of course, degenerate into mere pedantry. But at its best, it is the satisfaction of the man who, having a keen eye for beauty, is all the more solicitous for its accurate realization. The satisfactions of the connoisseur are merely a refinement of less sophisticated forms of appreciation. To appreciate the bare sounds of music, or the vividness of color in a painting is the prelude to more discriminating tastes. It is impossible for most men to have in all the arts expert judgment, but the ability to be able to discriminate with authority the technical achievements of a work of genius, while it does not supplant the emotional and sense satisfaction derived from the arts, nevertheless enhances them.

Art and æsthetic experience in the social order. The creative activity which is, to a peculiar extent, the artist's, is sought and practiced to some degree by all men. Genius

is rare, but talent of a minor sort is frequent. In the playing of a musical instrument, in the practice of a handicraft, in the cultivation of a garden, ordinary men in modern society find an outlet for invention, craftsmanship, and imagination. To give this joy of creation, in smaller or larger measure, to all men is to promote social happiness. In the discussion of instinct it was pointed out that men come nearest to attaining happiness when they are doing what is their bent by original nature, when they are acting out of sheer love of the activity rather than from compulsion. And since all men possess, although in moderate degree, the creative impulse, to give this impulse a chance is a distinct social good.

The employment of the creative imagination demands both leisure and training. Leisure is needed because, in the routine activities of industry, men's actions are determined not by their imagination, but by the immediacies of practical demands. There may be, as Helen Marot suggests, a possibility of a wide utilization of the creative impulse in industry. But a large part of industrial life must of necessity remain routine. In consequence, during their leisure hours alone, can men find free scope for some form of æsthetic interest and activity. The second requisite is training. Even the poor player of an instrument can derive some pleasure from his performance. And, under the accidents of economic and social circumstance, many a flower may really be born to blush unseen through the fact that its talents receive no opportunity. The occasional "discovery" by a wealthy man of a genius in the slums, indicates how a more liberal and general provision of training in the arts might redound to the general good. And a more widespread endowment of training in the fine arts, if it did not produce many geniuses, might at least produce a number of competent painters and musicians, who, in the practice of their skill, during their leisure, would derive considerable and altogether wholesome pleasure.

While high æsthetic capacity may be lacking in most people, æsthetic appreciation is widely diffused, and the education of

taste and the growth in appreciation of the arts have been marked. The museums of art in our large cities report a constantly increasing attendance, both of visitors to the galleries and attendants at lectures. And the crowds which regularly attend musical programs of a sustainedly high character in many cities, winter and summer, are evidence of how widespread and eager is appreciation of the fine arts. In the Scandinavian countries and in Germany one of the most remarkable social phenomena has been the growth of a widely supported people's theater movement, in which there has been consistent support of the highest type of operas and plays.

Art as an industry. The fact that objects of art are themselves immediate satisfactions and supply human wants, makes their provision for large numbers an important social enterprise. Certain forms of art, therefore, become highly industrialized. The provision of the objects of art becomes a profitable business, as it is also made possible only by a large economic outlay. Tolstoy in his *What is Art?* brings out strikingly the economic basis of artistic enterprises in contemporary society:

> For the support of art in Russia [1898], the government grants millions of roubles in subsidies to academies, conservatories, and theatres. In France, twenty million francs are assigned for art, and similar grants are made in Germany and England.
>
> In every large town enormous buildings are erected for museums, academies, conservatories, dramatic schools, and for performances and concerts. Hundreds of thousands of workmen — carpenters, masons, painters, joiners, paperhangers, tailors, hairdressers, jewelers, molders, type-setters — spend their whole lives in hard labor to satisfy the demands of art, so that hardly any other department of human activity, except the military, consumes so much energy as this.
>
> Not only is enormous labor spent on this activity, but in it, as in war, the very lives of men are sacrificed. Hundreds of thousands of people devote their lives from childhood to learning to twirl their legs rapidly (dancers), or to touch notes and strings very rapidly (musicians) or to turn every phrase inside out and find a rhyme for every word.[1]

[1] Tolstoy: *What is Art?* pp. 1–2 (written in 1898).

Tolstoy's point in thus emphasizing the immense energies devoted to artistic enterprises is to lead us to consider what is the end of all this labor. He points out scathingly the ugliness, frivolity, and crudity of much that passes for drama in the theater, for music in the concert hall, and for literature between covers. He pleads for a simple art that shall express with sincerity the genuine emotions of the great mass of men.

Whatever be our estimate of Tolstoy's sweeping condemnation of so much of what has come to be regarded as classic beauty, the point he makes about the commercialization of art is incontrovertible. If art is an industry, the good is determined, as it were, by popular vote. The many must be pleased rather than the discriminating. While, as has been noted, æsthetic appreciation is fairly general, appreciation of the subtler forms of art requires training. The glaring, the conspicuous, the broad effect, is more likely to win rapid popular approval than the subtle, the quiet, and the fragile. That taste is readily educable is true. But when immediate profits are the end, one cannot pause to educate the public. And publishing and the theater are two conspicuous instances of the conflicts that not infrequently arise between standards of economic return and standards of æsthetic merit. Even where there is no deliberate selection of the worse rather than the better, commercial standards operate to put the novel in art at a discount. As already pointed out, we tend to appreciate forms and ideas to which we are accustomed. In consequence, where commercial demands make immediate widespread appreciation necessary, the untried, the odd, the radical innovation in music, literature, or drama, is a questionable venture. There are notable instances of works which, though eventually recognized as great, had to go begging at first for a publisher or a producer. This was the case with some of Meredith's earlier novels; later Meredith, as a publisher's reader, turned down some of Shaw. The same inhospitality met some of the plays of Ibsen and some of the symphonies of Tschaikowsky.

Art and morals. Attention has already been called to the fact that objects of art are powerful vehicles for social propaganda. Indeed some works become famous less for their intrinsic beauty than for their moral force.[1] The effectiveness of art forms as instruments of propaganda lies in the fact, previously noted, that the ideas presented, with all the accouterments of color, form, and movement, are incomparably effective in stimulating passion; ideas thus aroused in the beholder have the vivid momentum of emotion to sustain them. There is only rhetorical exaggeration in the saying, "Let me sing a country's songs, and I care not who makes its laws." Plato was one of the first to recognize how influential art could be in influencing men's actions and attitudes. So keenly did he realize its possible influence, that in constructing his ideal state he provided for the rigid regulation of all artistic production by the governing power, and the exile of all poets. He felt deeply how insinuatingly persuasive poets could become with their dangerous "beautiful lies." Artists have, indeed, not infrequently been revolutionaries, at least in the sense that the world which they so ecstatically pictured makes even the best of actual worlds look pale and paltry in comparison. The imaginative genius has naturally enough been discontented with an existing order that could not possibly measure up to his ardent specifications. Shelley is possibly the supreme example of the type; against his incorrigible construction of perfect worlds in imagination he set the real world in which men live, and found it hateful.

In consequence of this discontent which the imaginative artist so often expresses with the real world, and the power of his enthusiastic visions to win the loyalties and affections of men, many moralists and statesmen have, like Plato, regarded the creative artist with suspicion. They have half believed the lyric boast of the Celtic poet who wrote:

[1] The classic instance of a work that certainly was notable in its early history for its propaganda value is *Uncle Tom's Cabin*. An extreme instance of a book famous almost exclusively for its vivid propaganda is Upton Sinclair's *The Jungle*.

"One man with a dream at pleasure,
Shall go forth and conquer a crown,
And three with a new song's measure,
Can trample an empire down.

"We, in the ages lying,
In the buried past of the earth,
Built Nineveh with our sighing,
And Babel itself with our mirth;
We o'erthrew them with prophesying
To the old of the new world's worth,
For each age is a dream that is dying,
Or one that is coming to birth." [1]

Many, therefore, who have reflected upon art — Plato first and chiefly — have insisted that art must be used to express only those ideas and emotions which when acted upon would have beneficent social consequences. Only those stories are to be told, those pictures to be painted, those songs to be sung, which contribute to the welfare of the state. Many artists have similarly felt a Puritanical responsibility; they have told only those tales which could be pointed with a moral. The supreme example of this dedication of art to a moral purpose is found in the Middle Ages, when all beauty of architecture, painting, and much of literature and drama, was pervaded, as it was inspired, with the Christian message. Later Milton writes at the beginning of *Paradise Lost*:

" . . . What in me is dark,
Illumine, what is low — raise and support,
That to the height of this great argument
I may assert Eternal Providence,
And justify the ways of God to man." [2]

In a sense, the supreme achievements of creative genius have been notable instances of the expression of great moral or religious or social ideals. Lucretius's *On the Nature of Things* is the noblest and most passionate extant rendering of the materialistic conception of life. Goethe's *Faust* expresses in epic magnificence a whole romantic philosophy

[1] O'Shaughnessy: *Ode to the Music-Makers.*
[2] Milton: *Paradise Lost,* book 1, lines 22–26.

of endless exploration and infinite desire. Dante's *Divine Comedy* sums up in a single magnificent epic the spirit and meaning of the mediæval point of view. As Henry Osborn Taylor writes of it:

> Yet even the poem itself was a climax long led up to. The power of its feeling had been preparing in the conceptions, even in the reasonings, which through the centuries had been gaining ardour as they became part of the entire natures of men and women. Thus had mediæval thought become emotionalized and plastic and living in poetry and art. Otherwise, even Dante's genius could not have fused the contents of mediæval thought into a poem. How many passages in the *Commedia* illustrate this — like the lovely picture of Lia moving in the flowering meadow, with her fair hands making her a garland. The twenty-third canto of the *Paradiso*, telling of the triumph of Christ and the Virgin, yields a larger illustration; and within it, as a very concrete lyric instance, floats that flower of angelic love, the song of Gabriel circling the Lady of Heaven with its melody, and giving quintessential utterance to the love and adoration which the Middle Ages had intoned to the Virgin. Yes, if it be Dante's genius, it is also the gathering emotion of the centuries, which lifts the last cantos of the *Paradiso* from glory to glory, and makes this closing singing of the *Commedia* such supreme poetry. Nor is it the emotional element alone that reaches its final voice in Dante. Passage after passage of the *Paradiso* is the apotheosis of scholastic thought and ways of stating it, the very apotheosis, for example, of those harnessed phrases in which the line of great scholastics had endeavoured to put in words the universalities of substance and accident and the absolute qualities of God.[1]

In these supreme instances the ideas have been given a genuinely æsthetic expression. They are beautiful in form and music, as well as in content and vision. But not infrequently where propaganda appears, art flies out of the window. Many modern plays and novels might be cited, which in their serious devotion to the enunciation of some social ideal, lapse from song into statistics. The artist with his eye on the social consequences of his work may come altogether to cease to regard standards of beauty. It is only the rare genius who can make

[1] Taylor: *The Mediæval Mind*, vol. II, pp. 588–89.

poetry out of politics. Even Shelley lapses into deadly and arid prosiness when his chief interest becomes the presentation of the political ideas of Godwin.

In contrast with the theory that art has a social responsibility, that so powerful an instrument must be used exclusively in the presentation of adequate social ideals, must be set the doctrine, widely current in the late nineteenth century, of "art for art's sake." To the exponents of this point of view, the artist has only one responsibility, the creation of beauty. It is his to realize in form every pulsation of interest and desire, to provide every possible exquisite sensation. The artist must not be a preacher; he must not tell men what is the good; he must show them the good, which is identical with the beautiful. And he must exhibit the beautiful in every unique and lovely posture which can be imagined, and which he can skillfully realize in color, in word, or in sound. Art is its own justification; "a thing of beauty is a joy forever."

Where art is governed by such intentions, form and material become more important than expression. Thus there develops in France in the late nineteenth century a school of Symbolists and Sensationalists in poetry, whose single aim is the production of precise and beautiful sensations through the specific use of evocative words. The form and the style become everything in literature, in painting, and the plastic arts. The emphasis is put upon exquisiteness in decoration, upon precision in technique, upon loveliness of material. The Pre-Raphaelite movement in poetry, with its emphasis on the use of picturesque and decorative epithets, the exclusive emphasis in some modern music on subtlety of technique in tone and color, are recent examples.

The position taken has clearly this much justification. A work does not become a work of art through the fact that it expresses noble sentiments. The most righteous sermon may not be beautiful. Whatever be the source of its inspiration, art must make its appeal through the palpable and undeni-

able beauty of the formal embodiment it has given to its vision. However much an object be prized as a moral instrument, unless it stirs the senses and the imagination, it hardly can be called a work of art. On the other hand, things intrinsically beautiful do seem to be their own justification. A poem of Keats, a Japanese print, a delicate vase, or an exquisite song demand no moral justification. They are their own sufficient excuse for being.

But the "art for art's sake" doctrine, carried to extremes, results in mere decadence or triviality. It produces at best exquisite decorative trifles rather than works of a large and serious beauty. Music seems to be the art where sheer beauty of form is its own justification, for music can hardly be used as a specific medium of communication. Those compositions that purport to be "program music," to convey definite impressions of particular scenes or ideas, are somewhat halting attempts to use music as one uses language. Yet even in music, though we may enjoy ingenious and fluent melodic trifles, we regard them less highly than the earnest and magnificent beauty of a Beethoven symphony.

But because art is only effective when it appeals to the senses and to the imagination does not mean that the senses and the imagination must be stirred by insignificance. The artist may use the rhythms of music, line and color, the suggestiveness of words, in the interests of ideal values. Gifted, as he is, with imaginative foresight to imagine a world better than the one in which he is living, he may, by picturing ideals in persuasive form, not only bring them before the mind of man, but insinuate them into his heart. The rational artist may note the possibilities afoot in his environment. He may treasure these hints of human happiness, and by giving them vivid reality in the forms of art indicate captivatingly to men where possible perfections lie. "For your young men shall see visions, and your old men shall dream dreams." The artist may become the most influential of prophets, for his prophecies come to men not as arbitrary counsels, but as pictures of

Perfection intrinsically lovely and intriguing. When Socrates is asked whether or not his perfect city exists, he replies that it exists only in Heaven, but that men in beholding it may, in the light of that divine pattern, learn to attain in their earthly cities a not dissimilar beauty.

CHAPTER XIV

SCIENCE AND SCIENTIFIC METHOD

What science is. Science may be considered either as the product of a certain type of human activity, or as a human activity satisfactory even apart from its fruits. As an activity, it is a highly refined form of that process of reflection by which man is, in the first place, enabled to make himself at home in the world. It differs from the ordinary or common-sense process of thinking, as we shall presently see, in being more thoroughgoing, systematic, and sustained. It is common sense of a most extraordinarily refined and penetrating kind. But before examining the procedure of science, we must consider briefly its imposing product, that science whose vast structure seems to the layman so final, imposing, and irrefragable.

From the point of view of the product which is the fruit of reflective activity, Science may be defined as *a body of systematized and verified knowledge, expressing in general terms the relations of exactly defined phenomena.* In all the respects here noted, science may be contrasted with those matters of *common knowledge,* of *opinion* or *belief* which are the fruit of our casual daily thinking and experience. Science is, in the first place, a body of *systematized* knowledge. One has but to contrast the presentation of facts in an ordinary textbook in zoölogy with the random presentation of facts in a newspaper or in casual conversation. In science the facts bearing on a given problem are presented as completely as possible and are classified with reference to their significant bearings upon the problem. Moreover the facts gathered and the classifications of relationship made are not more or less accurate, more or less true; they are tested and verified results. That putrefaction, for example, is due to the life of micro-organisms in

the rotting substance is not a mere assumption. It has been proved, tested, and verified by methods we shall have occasion presently to examine.

Scientific knowledge, moreover, is general knowledge. The relations it expresses are not *true* in some cases of the precise kind described, *untrue* in others. The relations hold true whenever these precise phenomena occur. This generality of scientific relations is closely connected with the fact that science expresses relations of exactly defined phenomena. When a scientific law expresses a certain relation between A and B, it says in effect: Given A as meaning this particular set of conditions and no others, and B as meaning this particular set of conditions and no others, then this relation holds true. The relations between *exactly* defined phenomena are expressed in general terms, that is, the relations expressed hold true, given certain conditions, whatever be the accompanying circumstances. It makes no difference what be the kind of objects, the law of gravitation still holds true: the attraction between objects is directly proportional to the product of their masses and inversely proportional to the square of the distance between them.

Thus science as an activity is marked off by its method and its intent rather than by its subject-matter. As a method it is characterized by thoroughness, persistency, completeness, generality, and system. As regards its intent, it is characterized by its freedom from partiality or prejudice, and its interest in discovering what the facts are, apart from personal expectations and desires. In the scientific mood we wish to know what the nature of things is. There are men who seem to have a boundless, insatiable curiosity, who have a lifelong passion for acquiring facts and understanding the relationship between them.

Science as explanation. The satisfactions which scientific investigators derive from their inquiries are various. There is, in the first place, the sheer pleasure of gratifying the normal human impulse of curiosity, developed in some people to an

extraordinary degree. Experience to a sensitive and inquiring mind is full of challenges and provocations to look further. The appearance of dew, an eclipse of the sun, a flash of lightning, a peal of thunder, even such commonplace phenomena as the falling of objects, or the rusting of iron, the evaporation of water, the melting of snow, may provoke inquiry, may suggest the question, "Why?" Experience, as it comes to us through the senses, is broken and fragmentary. The connections between the occurrences of Nature seem casual, and connected, as it were, purely by accident. A black sky portends rain. But such an inference made by the untrained mind is merely the result of habit. A black sky has been followed by rain in the past; the same sequence of events may be expected in the future. But the connection between the two is not really understood. Sometimes experiences seem to contradict each other. The straight stick looks crooked or broken in water. The apparent anomalies and contradictions, the welter of miscellaneous facts with which we come in contact through the experiences of the senses, are clarified by the generalizations of science. The world of facts ceases to be random, miscellaneous, and incalculable. Every phenomenon that occurs is seen to be an instance of a general law that holds among all phenomena that resemble it in certain definable respects. Thus the apparent bending of the stick in water is seen to be a special case of the laws of the refraction of light; the apparent anomaly or contradiction of our sense experiences is, as we say, explained. What seemed to be a contradiction and an exception is seen to be a clear case of a regular law.

The desire for explanation in some minds is very strong. Science *explains* in the sense that *it reduces a phenomenon to the terms of a general principle, whatever that principle may be.* When we meet a phenomenon that seems to come under no general law, we are confronted with a mystery and a miracle. We do not know what to expect from it. But when we can place a phenomenon under a general law, applicable in a wide

variety of instances, everything that can be said of all the other instances in which the law applies, applies also to this particular case.

> Think of heat as motion, and whatever is true of motion will be true of heat; but we have had a hundred experiences of motion for every one of heat. Think of the rays passing through this lens as bending toward the perpendicular, and you substitute for the comparatively unfamiliar lens the very familiar notion of a particular change in direction of a line, of which motion every day brings us countless examples.[1]

It must be noticed that the explanation which science gives, is really in answer to the question, "How?" not the question, "Why?" We are said to understand phenomena when we understand the laws which *govern* them. But to say that certain given phenomena — the appearance of dew, the falling of rain, the flash of lightning, the putrefaction of animal matter — *obey* certain laws is purely metaphorical. Phenomena do not *obey* laws in the sense in which we say the child follows the commands of his parents, or the soldier those of his officer. The laws of science simply describe the relations which have repeatedly been observed to exist between phenomena. They are laws in the sense that they are invariably observed successions. When it has been found that whenever A is present, B is also present, that the presence of A is always correlated with the presence of B, and the presence of B is always correlated with the presence of A, we say we have discovered a scientific law.

Science thus explains in the sense that it reduces the multiplicity and variety of phenomena to simple and general laws. The ideal of unity and simplicity is the constant ideal toward which science moves, and its success in thus reducing the miscellaneous facts of experience has been phenomenal. The history of science in the nineteenth century offers some interesting examples. The discovery of the conservation of energy and its transformations has revealed to us the unity

[1] James: *Psychology*, vol. II, p. 342.

of force. It has shown, for example, that the phenomenon of heat could be explained by molecular motions. "Electricity annexed magnetism." Finally the relations of electricity and light are now known; "the three realms of light, of electricity and of magnetism, previously separated, form now but one; and this annexation seems final."

There has been thus an increasing approach toward unity, toward the summation of phenomena under one simple, general formula.[1] Poincaré, in reviewing this progress, writes:

> The better one knows the properties of matter the more one sees continuity reign. Since the labors of Andrews and Van der Wals, we get an idea of how the passage is made from the liquid to the gaseous state and that this passage is not abrupt. Similarly there is no gap between the liquid and solid states, and in the proceedings of a recent congress is to be seen, alongside of a work on the rigidity of liquids, a memoir on the flow of solids. . . .
>
> Finally the methods of physics have invaded a new domain, that of chemistry; physical chemistry is born. It is still very young, but we already see that it will enable us to connect such phenomena as electrolysis, osmosis, and the motions of ions.
>
> From this rapid exposition what shall we conclude?
>
> Everything considered, we have approached unity; we have not been as quick as we had hoped fifty years ago, we have not always taken the predicted way; but, finally, we have gained ever so much ground.[2]

The satisfaction which disinterested science gives to the investigator is thus, in the first place, one of clarification. Science, by enabling us to see the wide general laws of which all phenomena are particular instances, emancipates the imagination. It frees us from being bound by the accidental suggestions which come to us from mere personal caprice,

[1] Poincaré notes also the opposite tendency, for science to grow more complex. As he says: "And Newton's law itself? Its simplicity, so long undetected, is perhaps only apparent. Who knows whether it is not due to some complicated mechanism, to the impact of some subtile matter animated by irregular movements, and whether it has not become simple only through the action of averages and of great numbers? In any case it is difficult not to suppose that the true law contains complementary terms, which would become sensible at small distances." (*Foundations of Science*, p. 132.)

[2] Poincaré: *loc. cit.*, pp. 153–54.

habit, and environment, and enables us to observe facts uncolored by passions and hope, and to discover those laws of the universe which, in the words of Karl Pearson, "hold for all normally constituted minds." In ordinary experience, our impressions and beliefs are the results of inaccurate sense observation colored by hope and fear, aversion and revulsion, and limited by accidental circumstance. Through science we are enabled to detach ourselves from the personal and the particular and to see the world, as, undistorted, it must appear to any man anywhere:

> The scientific attitude of mind involves a sweeping away of all other desires in the interests of the desire to know — it involves suppression of hopes and fears, loves and hates, and the whole subjective emotional life, until we become subdued to the material, able to see it frankly, without preconceptions, without bias, without any wish except to see it as it is, and without any belief that what it is must be determined by some relation, positive or negative, to what we should like it to be, or to what we can easily imagine it to be.[1]

Besides the satisfactions of system and clarity which the sciences give, they afford man power and security. "Knowledge is power," said Francis Bacon, meaning thereby that to know the connection between causes and effects was to be able to regulate conditions so as to be able to produce desirable effects and eliminate undesirable ones. Even the most disinterested inquiry may eventually produce practical results of a highly important character. "Science is," as Bertrand Russell says, " to the ordinary reader of newspapers, represented by a varying selection of sensational triumphs, such as wireless telegraphy and aeroplanes, radio-activity, etc." But these practical triumphs in the control of natural resources are often casual incidents of patiently constructed systems of knowledge which were built up without the slightest reference to their fruits in human welfare. Wireless telegraphy, for example, was made possible by the disinterested and abstract inquiry of three men, Faraday, Maxwell, and Hertz.

[1] Bertrand Russell: *Mysticism and Logic*, p. 44.

In alternating layers of experiment and theory these three men built up the modern theory of electromagnetism, and demonstrated the identity of light with electromagnetic waves. The system which they discovered is one of profound intellectual interest, bringing together and unifying an endless variety of apparently detached phenomena, and displaying a cumulative mental power which cannot but afford delight to every generous spirit. The mechanical details which remained to be adjusted in order to utilize their discoveries for a practical system of telegraphy demanded, no doubt, very considerable ingenuity, but had not that broad sweep and that universality which could give them intrinsic interest as an object of disinterested contemplation.[1]

Science and a world view. One of the values of disinterested science that is of considerable psychological importance is the change in attitude it brings about in man's realization of his place in the universe. Lucretius long ago thought to free men's minds from terror and superstition by showing them how regular, ordered, and inevitable was the nature of things. The superstitious savage walks in dread among natural phenomena. He lives in a world which he imagines to be governed by capricious and incalculable forces. To a certain extent he can, as we have seen, control these. But he is ill at ease. He is surrounded by vast ambiguous forces, and moves in a trembling ignorance of what will happen next.

To those educated to the scientific point of view, there is a solidity and assurance about the frame of things. Beneath the variability and flux, which they continually perceive, is the changeless law which they have learned to comprehend. Although they discover that the processes of Nature move on indifferent to the welfare of man, they know, nevertheless, that they are dependable and certain, that they are fixed conditions of life which, to a certain extent, can be controlled, and the incidental goods and ills of which are definitely calculable. Heraclitus, the ancient Greek philosopher, noted the eternal flux, yet perceived the steady order beneath, so that he could eventually assert that all things changed save the law of

[1] Bertrand Russell: *Mysticism and Logic*, p. 34 ("Science and Culture").

change. The magnificent regularity of natural processes has been repeatedly remarked by students of science.

The æsthetic value of science. As pointed out in the chapter on Art, scientific discovery is more than a mere tabulation of facts. It is also a work of the imagination, and gives to the worker in the scientific field precisely the same sense of satisfaction as that experienced by the creative artist. Of Kelvin his biographer writes:

> Like Faraday and the other great masters in science, he was accustomed to let his thoughts become so filled with the facts on which his attention was concentrated that the relations subsisting between the various phenomena gradually dawned upon him, and he *saw* them, as if by some process of instinctive vision denied to others. . . . His imagination was vivid; in his intense enthusiasm, he seemed to be driven rather than to drive himself. The man was lost in his subject, becoming as truly inspired as is the artist in the act of creation.[1]

In the working-out of a principle, the systematizing of many facts under a sweeping generalization, the scientist finds a creator's joy. He is giving form and significance to the disordered and chaotic materials of experience. The scientific imagination differs from the artistic imagination simply in that it is controlled with reference to facts. The first flash is subjected to criticism, examination, revision, and testing. But the grand generalizations of science originate in just such an unpredictable original vision. The discovery of the fitting formula which clarifies a mass of facts hitherto chaotic and contradictory is very closely akin to the process by which a poet discovers an appropriate epithet or a musician an apposite chord.

But in its products as well as in its processes, scientific investigations have a high æsthetic value. There is symmetry, order, and splendor in the relations which science reveals. The same formal beauty that appeals to us in a Greek statue or a Beethoven symphony is to be found in the universe, but

[1] Sylvanus P. Thompson: *The Life of William Thomson, Baron Kelvin of Largs*, pp. 1125 ff.

on a far more magnificent scale. There is, in the first place, the sense of rhythm and regularity:

> There comes [to the scientific investigator] a sense of pervading order. Probably this began at the very dawn of human reason — when man first discovered the year with its magnificent object-lesson of regularly recurrent sequences, and it has been growing ever since. Doubtless the early forms that this perception of order took referred to somewhat obvious uniformities; but is there any essential difference between realizing the orderliness of moons and tides, of seasons and migrations, and discovering Bodes's law of the relations of the planets, or Mendeléeff's "Periodic Law" of the relations of the atomic weights of the chemical elements?[1]

Ever since Newton's day the harmony of the spheres has been a favorite poetic metaphor. The spaciousness of the solar system has captivated the imagination, as have the time cycles revealed by the paths of comets and meteors. The universe seems indeed, as revealed by science, to present that quality of æsthetic satisfaction which is always derived from unity in multiplicity. The stars are as innumerable as they are ordered. And it was Lucretius, the poet of naturalism, who was wakened to wonder and admiration at the ceaseless productivity, inventiveness, and fertility of Nature. We find in the revelations of science again the same examples of delicacy and fineness of structure that we admire so much in the fine arts. The brain of an ant, as Darwin said, is perhaps the most marvelous speck of matter in the universe. Again "the physicists tell us that the behaviour of hydrogen gas makes it necessary to suppose that an atom of it must have a constitution as complex as a constellation, with about eight hundred separate corpuscles."[2]

The danger of "pure science." The fascinations of disinterested inquiry are so great that they may lead to a kind of scientific intemperance. The abstracted scientific interest may become so absorbed in the working-out of small details that it becomes over-specialized, narrow, and pedantic. The pure theorist has always been regarded with suspicion by the

[1] Thomson: *Introduction to Science*, p. 174. [2] *Ibid.*, p. 176.

practical man. His concern over details of flora or fauna, over the precise minutiæ of ancient hieroglyphics, seems absurdly trivial in comparison with the central passions and central purposes of mankind. There are workers in every department of knowledge who become wrapt up in their specialties, forgetting the forest for the trees. There are men so absorbed in probing the crevices of their own little niche of knowledge that they forget the bearings of their researches. Especially in time of stress, of war or social unrest, men have felt a certain callousness about the interests of the abstrusely remote scholar. We shall have occasion to note presently that it is in this coldness and emancipation from the pressing demands of the moment that science has produced its most pronounced eventual benefits for mankind. But an uncontrolled passion for facts and relations may degenerate into a mere play and luxury that may have its fascination for the expert himself, but affords neither sweetness nor light to any one else. One has but to go over the lists of doctors' dissertations published by German universities during the late nineteenth century to find examples of inquiry that seem to afford not the slightest justification in the way of eventual good to mankind.[1]

Practical or applied science. Thus far we have been considering science chiefly as an activity which satisfies some men as an activity in itself, by the æsthetic, emotional, and intellectual values they derive from it. But a fact at once paradoxical and significant in the history of human progress is that this most impersonal and disinterested of man's activities has been profoundly influential in its practical fruits. The practical application of the sciences rests on the utilization of the exact formulations of pure science. Through these formulations we can control phenomena by artificially setting up relations of which science has learned the consequences,

[1] It is only fair to say that literary studies have been marked by more barren and fruitless investigations (purely philological inquiry, for example) than have the physical sciences.

thus attaining the consequences we desire, and avoiding those we do not.

The *direct* influence of pure science on practical life is enormous. The observations of Newton on the relations between a falling stone and the moon, of Galvani on the convulsive movements of frogs' legs in contact with iron and copper, of Darwin on the adaptation of woodpeckers, of tree-frogs, and of seeds to their surroundings, of Kirchhoff on certain lines which occur in the spectrum of sunlight, of other investigators on the life-history of bacteria — these and kindred observations have not only revolutionized our conception of the universe, but they have revolutionized or are revolutionizing, our practical life, our means of transit, our social conduct, our treatment of disease.[1]

Francis Bacon was one of the first to appreciate explicitly the possibilities of the control of nature in the interests of human welfare. He saw the vast possibilities which a careful and comprehensive study of the workings of nature had in the enlargement of human comfort, security, and power. In *The New Atlantis* he envisages an ideal commonwealth, whose unique and singular institution is a House of Solomon, a kind of Carnegie Foundation devoted to inquiry, the fruits of which might be, as they were, exploited in the interests of human happiness: "The end of our foundation is the knowledge of causes and the secret motions of things; and the enlarging of the bounds of human empire to the effecting of all things possible." [2]

Science sometimes appears so remote and alien to the immediate concrete objects which meet and interest us in daily experience that we tend to forget that historically it was out of concrete needs and practical interests that science arose. Geometry, seemingly a clear case of abstract and theoretical science, arose out of the requirements of practical surveying and mensuration among the Egyptians. In the same way botany grew out of herb gathering and gardening.

The application of the exact knowledge gained by the pure sciences, may, if properly directed, immeasurably increase the

[1] Karl Pearson: *The Grammar of Science*, pp. 35–36. [2] *The New Atlantis.*

sum of human welfare. One has but to review briefly the history of invention to appreciate this truth with vividness and detail. The great variety of the "applied sciences" shows the extent and multiplicity of the fruits of theoretical inquiry. Astronomy plays an important part in navigation; but it also earns its living by helping the surveyor and the map-maker and by supplying the world with accurate time. Industrial chemistry offers, perhaps, the most striking examples. There is, for example, the fixation of nitrogen, which makes possible the artificial production of ammonia and potash; the whole group of dye industries made possible through the chemical production of coal tar; the industrial utilization of cellulose in the paper, twine, and leather industries; the promise of eventual production on a large scale of synthetic rubber; the electric furnace, which, with its fourteen-thousand-degree range of heat, makes possible untold increase in the effectiveness of all the chemical industries.

Industrial chemistry is only one instance. The application of theoretical inquiry in physics has made possible the telegraph, the telephone, wireless telegraphy, electric motors, and flying machines. Mineralogy and oceanography have opened up new stores of natural resources. Biological research has had diverse applications. Bacteriological inquiry has been fruitfully applied in surgery, hygiene, agriculture, and the artificial preservation of food. The principles of Mendelian inheritance have been used in the practical improvement of domestic animals and cultivated plants. The list might be indefinitely extended. The sciences arose as attempts, more or less successful, to solve man's practical problems. They became historically cut off, as they may in the case of the pure scientist still be cut off, from practical considerations. But no matter how remote and abstract they become, they yield again practical fruits.

Applied science, if it becomes too narrowly interested in practical results, limits its own resources. Purely theoretical inquiry may be of the most immense ultimate advantage. In

a sense the more abstract and remote science becomes, the more eventual promise it contains. By getting away from the confusing and irrelevant details of particular situations, science is enabled to frame generalizations applicable to a wide array of phenomena differing in detail, but having in common significant characteristics. Men can learn fruitfully to control their experience precisely because they can emancipate themselves from the immediate demands of practical life, from the suggestions that arise in the course of instinctive and habitual action. "A certain power of *abstraction*, of deliberate turning away from the habitual responses to a situation, was required before men could be emancipated to follow up suggestions that in the end are fruitful."[1]

Too complete absorption in immediate problems may operate to deprive action of that sweeping and penetrating vision which a freer inquiry affords. The temporarily important may be the less important in the long run. A practical adjustment of detail may produce immediate benefits in the way of improved industrial processes and more rapid and economical production, but some seemingly obscure discovery in the most abstruse reaches of scientific theory may eventually be of untold practical significance.

> Only the extremely ignorant can question the utility of, let us say, the prolonged application of the Greek intellect to the laws of conic sections. Whether we think of bridges or projectiles, of the curves of ships, or of the rules of navigation, we must think of conic sections. The rules of navigation, for instance, are in part based on astronomy. Kepler's Laws are foundation stones of that science, but Kepler discovered that Mars moves in an ellipse round the sun in one of the foci by a deduction from conic sections. . . . Yet the historical fact is that these conic sections were studied as an abstract science for eighteen centuries before they came to be of their highest use.[2]

Pasteur, whose researches are of such immediate consequence in human health, began his studies in the crystalline forms of tartrates. The tremendous commercial uses which have

[1] Dewey: *How We Think*, p. 156.
[2] Thomson: *Introduction to Science*, pp. 239–40.

been made of benzene had their origin "in a single idea, advanced in a masterly treatise by Auguste Kekule in the year 1865." [1]

Practical life has been continually enriched by theoretical inquiry. Scientific descriptions increase in value as they become absolutely impersonal, absolutely precise, and especially as they become condensed general formulas, which will be applicable to an infinite variety of particular situations. And such descriptions are necessarily abstract and theoretical.

Analysis of scientific procedure. Scientific method is merely common sense made more thoroughgoing and systematic. Reflection of a more or less effective kind takes place in ordinary experience wherever instinctive or habitual action is not adequate to meet a situation, whenever the individual has a problem to solve, an adjustment to make. Thinking, of some kind, goes on continually. Scientific thinking merely means careful, safeguarded, systematic thinking. It is thinking alert and critical of its own methods. As contrasted with ordinary common-sense thinking, it is distinguished by "caution, carefulness, thoroughness, definiteness, exactness, orderliness, and methodic arrangement." We think, in any case, because we have to, being creatures born with a set of instincts not adequate to meet the conditions of our environment. We can think carelessly and ineffectively, or carefully and successfully.

Scientific method, or orderly, critical, and systematic thinking, is not applicable to one subject-matter exclusively. Examples are commonly drawn from the physical or chemical or biological laboratory, but the elements of scientific method may be illustrated in the procedure of a business man meeting a practical problem, a lawyer sifting evidence, a statesman framing a new piece of legislation. In all these cases the difference between a genuinely scientific procedure and mere casual and random common sense is the same.

[1] Quoted by Thomson from an address on "Technical Chemistry" by C. E. Munroe.

Science is nothing but *trained and organized common sense*, differing from the latter only as a veteran may differ from a raw recruit: and its methods differ from those of common sense only so far as the guardsman's cut and thrust differ from the manner in which a savage wields his club. The primary power is the same in each case, and perhaps the untutored savage has the more brawny arm of the two. The *real* advantage lies in the point and polish of the swordsman's weapon; in the trained eye quick to spy out the weakness of the adversary; in the ready hand prompt to follow it on the instant. But, after all, the sword exercise is only the hewing and poking of the clubman refined and developed.

So, the vast results obtained by science are won by . . . no mental processes, other than those which are practiced by every one of us, in the humblest and meanest affairs of life. A detective policeman discovers a burglar from the marks made by his shoe, by a mental process identical with that by which Cuvier restored the extinct animals of Montmartre from fragments of their bones. . . . Nor does that process of induction and deduction by which a lady finding a stain of a peculiar kind upon her dress, concludes that somebody has upset the inkstand thereon, differ, in any way, in kind, from that by which Adams and Leverrier discovered a new planet.

The man of science, in fact, simply uses with scrupulous exactness the methods which we all, habitually and at every moment, use carelessly; and the man of business must as much avail himself of the scientific method — must as truly be a man of science — as the veriest bookworm of us all.[1]

The scientific procedure becomes, as we shall see, highly complicated, involving elaborate processes of observation, classification, generalization, deduction or development of ideas, and testing. But it remains thinking just the same, and originates in some problem or perplexity, just as thinking does in ordinary life.

Science and common sense. It is profitable to note in some detail the ways in which scientific method, in spirit and technique, differs from common-sense thinking. It is more insistent in the first place on including the whole range of relevant data, of bringing to light all the facts that bear on a

[1] Huxley: *Lay Sermons, Addresses, and Reviews*, pp. 77, 78 (in "The Educational Value of the Natural History Sciences").

given problem. In common-sense thinking we make, as we say, snap judgments; we jump at conclusions. Anything plausible is accepted as evidence; anything heard or seen is accepted as a fact. The scientific examiner insists on examining and subjecting to scrutiny the facts at hand, on searching for further facts, and on distinguishing the facts genuinely significant in a given situation from those that happen to be glaring or conspicuous. This is merely another way of saying that both accuracy and completeness of observation are demanded, accuracy in the examination of the facts present, and completeness in the array of facts bearing on the question at hand.

Scientific thinking is thus primarily inquiring and skeptical. It queries the usual; it tries, as we say, to penetrate beneath the surface. Common sense, for example, gives suction as the explanation of water rising in a pump. But where, as at a great height above sea level, this mysterious power of suction does not operate, or when it is found that it does not raise water above thirty-two feet, common sense is at a loss. Scientific thinking tries to analyze the gross fact, and by accurately and completely observing all the facts bearing on the phenomenon endeavors to find out "what *special* conditions are present when the effect occurs" and absent when it does not occur. Instead of trying to fit all unusual, contradictory, or exceptional facts into *a priori* ideas based on miscellaneous and unsifted facts, it starts without any *fixed* conclusions beforehand, but carefully observes all the facts which it can secure with reference to a particular problem, deliberately seeking the exceptional and unusual as crucial instances. Thus in a sociological inquiry, the scientist, instead of accepting "common-sense" judgments (based on a variety of miscellaneous, incomplete, and unsifted facts) that certain races are inferior or superior, tries, by specific inquiries, to establish the facts of racial capacities or defects. Instead of accepting proverbial wisdom and popular estimates of the relative capacities of men and women, he tries by careful observation and

experiment accurately to discover all the facts bearing on the question, and to generalize from those facts.

Scientific method thus discounts prejudice or dogmatism. A prejudice is literally a pre-judgment. Common sense sizes up the situation beforehand. Instead of examining a situation in its own terms, and *arriving* at a conclusion, it *starts* with one. The so-called hard-headed man of common sense *knows* beforehand. He has a definite and stereotyped reaction for every situation with which he comes in contact. These rubber-stamp responses, these unconsidered generalizations, originate in instinctive desires, or in preferences acquired through habit. Common sense finds fixed pigeon holes into which to fit all the variety of specific circumstances and conditions which characterize experience. "When its judgments happen to be correct, it is almost as much a matter of good luck as of method. . . . That potatoes should be planted only during the crescent moon, that near the sea people are born at high tide and die at low tide, that a comet is an omen of danger, that bad luck follows the cracking of a mirror," all these are the results of common-sense observation. Matters of common knowledge are thus not infrequently matters of common misinformation.

Common-sense knowledge is largely a matter of uncritical belief. When there is absent scientific examination of the sources and grounds of belief, those judgments and conclusions are likely to be accepted which happen to have wide social currency and authority. In an earlier chapter, it was shown how the mere fact of an opinion prevailing among a large number of one's group or class gives it great emotional weight. Where opinions are not determined by intelligent examination and decision, they are determined by force of habit, early education, and the social influences to which one is constantly exposed.

The scientific spirit is a spirit of emancipated inquiry as contrasted with blind acceptance of belief upon authority. The phenomenal developments of modern science began

when men ceased to accept authoritatively their beliefs about man and nature, and undertook to examine phenomena in their own terms. The phenomenal rise of modern science is coincident with the collapse of unquestioning faith as the leading ingredient of intellectual life.

Common sense renders men peculiarly insensitive to the possibilities of the novel, peculiarly susceptible to the influence of tradition. It was common sense that credited the influence of the position of the stars upon men's welfare, the power of old women as witches, and the unhealthiness of night air. It was common sense also that ridiculed Fulton's steamboat, laughed at the early attempts of telegraphy and telephony, and dismissed the aeroplane as an interesting toy. The characteristic feature of common sense or empirical thinking is its excess traditionalism, its wholesale acceptance of authority,[1] its reliance upon precedent. Where beliefs are not subjected to critical revision and examination, to the constant surveillance of the inquiring intelligence, there will be no criterion by which to estimate the true and the false, the important and the trivial. All beliefs that have wide social sanction, or that chime in with immediate sense impressions, established individual habits, or social customs will be accepted with the same indiscriminate hospitality. To common sense the sun *does* appear to go round the earth; the stick *does* appear broken in water. Thus "totally false opinions may appear to the holder of them to possess all the character of rationally verifiable truth."

The dangers and falsities of common-sense judgments are conditioned not only by expectations and standards fixed by the social environment, but by one's own personal predilections and aversions. Recent developments in psychology have made much of the fact that many of our so-called reasoned judgments are rationalizations, secondary reasons

[1] "Authority" in this sense of social prestige must be distinguished from "authority" in the sense of scientific authority. The acceptance of the authority of the expert is the acceptance of opinions that we have good reason to believe are the result of scientific inquiry.

found after our initial, primary, and deep-seated emotional responses have been made. They are the result of emotional "complexes," fears, expectations, and desires of which we are not ourselves conscious.[1] It is from these limiting conditions of personal preference and social environment that scientific method frees us.

Again, even where common-sense judgments are not particularly qualified by such conditions, they are frequently based upon the observation of purely accidental conjunctions of circumstances. A sequence once or twice observed is taken as the basis of a causal relation. This gives rise to what is known in technical logic as the *post hoc ergo propter hoc* fallacy; that is, the assumption that because one thing happens *after* another, therefore it happens *because* of it. Many superstitions probably had their origin in such chance observations, and belief in them is strengthened by some accidental confirmation. Thus if a man walks under a ladder one day and dies the next, the believer in the superstition that walking under a ladder brings fatal results will find in this instance a clear ratification of his belief. There seems to be

[1] "When a party politician is called upon to consider a new measure, his verdict is largely determined by certain constant systems of ideas and trends of thought, constituting what is generally known as 'party bias.' We should describe these systems in our newly acquired terminology as his 'political complex.' The complex causes him to take up an attitude toward the proposed measure which is quite independent of any absolute merits that the latter may possess. If we argue with our politician, we shall find that the complex will reinforce in his mind those arguments which support the view of his party, while it will infallibly prevent him from realizing the force of the arguments propounded by the opposite side. Now, it should be observed that the individual himself is probably quite unaware of this mechanism in his mind. He fondly imagines that his opinion is formed solely by the logical pros and cons of the measure before him. We see, in fact, that not only is his thinking determined by a complex of whose action he is unconscious, but that he believes his thoughts to be the result of other causes which are in reality insufficient and illusory. This latter process of self-deception, in which the individual conceals the real foundation of his thought by a series of adventitious props, is termed 'rationalization.'

"The two mechanisms which manifest themselves in our example of the politician, the unconscious origin of beliefs and actions, and the subsequent process of rationalization to which they are subjected, are of fundamental importance in psychology." (Bernard Hart: *The Psychology of Insanity*, pp. 64–66.)

an inveterate human tendency to seek for causes, and by those who are not scientific inquirers causes are lightly assigned. It is easiest and most plausible to assign as a cause an immediately preceding circumstance. Exceptional or contradictory circumstances are then either unnoticed or pared down to fit the belief.

Scientific method does not depend on such chance conjunctions of circumstance, but controls its observations or experimentally arranges conditions so as to discover what are the conditions necessary to produce given effects, or what effects invariably follow from given causes. It does not accept a chance conjunction as evidence of an invariable relation, but seeks, under regulated conditions, to discover what the genuinely invariable relations are. This method of controlling our generalizations about the facts of experience, we shall presently examine in some detail.

Curiosity and scientific inquiry. Curiosity, the instinctive basis of the desire to know, is the basis of scientific inquiry. Without this fundamental desire, there could be no sustaining motive to deep and thoroughgoing scientific research, for theoretical investigations do not always give promise of immediate practical benefits. The scientific interest is a development of that restless curiosity for a knowledge of the world in which they are living which children so markedly exhibit. Beginning as a kind of miscellaneous and omnivorous appetite for facts of whatever description, it grows into a desire to understand the unsuspected and hidden relations between facts, to penetrate to the unities discoverable beneath the mysteries and multiplicities of things.

The scientific mood is thus in the first place a sheer instinctive curiosity, a basic passion for facts. It is this which sustains the scientific worker in the sometimes long and dreary business of collecting specimens, instances, details. Many of the most notable scientific advances, as Lord Kelvin pointed out, must be attributed to the most protracted and unmitigated drudgery in the collection of facts, a thoroughgoing and

trying labor in which the scientific worker could persist only when fortified by an eager and insistent curiosity. This "hodman's work" is the basis of the great generalizations which constitute the framework of the modern scientific systems. "The monotonous and quantitative work of star-cataloguing has been continued from Hipparchus, who began his work more than a century before Christ, work which is continued even to the present day. This work, uninspiring as it seems, is yet an essential basis for the applications of astronomy, the determination of time, navigation, surveying. Furthermore, without good star places, we can have no theory of the motions of the solar system, and without accurate catalogues of the stars we can know nothing of the grander problems of the universe, the motion of our sun among the stars, or of the stars among themselves." [1]

Not only is curiosity a sustaining motive in the drudgery of collection and research incident and essential to scientific generalization; it alone makes possible that suspense of judgment which is necessary to fruitful scientific inquiry. This suspense is, as we have already seen, difficult for most men. Action demands immediate decision, and inquiry deliberately postpones decision. It is only a persistent desire to "get at the bottom of the matter" that will act as a check upon the demands of social life and of individual impatience which rush us to conclusions. In most men, as earlier noted, the sharp edge of curiosity becomes easily blunted. They are content, outside their own immediate personal interests, "to take things for granted." They glide over the surfaces of events, they cease to query the authenticity of facts, or to examine their relevance and their significance, or to be concerned about their completeness. For an example, one has but to listen to or partake in the average discussion of any political or social issue of the present day. There are few men who retain, even as far as middle life, a genuinely inquiring interest in men and affairs. Their curiosity is dulled by fatigue and the pressure

[1] Hinks: *Astronomy*, p. 162.

of their own interests and preoccupations, and they allow their prejudices and formulas to pass for judgments and conclusions. The scientist is the man in whom curiosity has become a permanent passion, who, as long as he lives, is unwilling to forego inquiry into the processes of Nature, or of human relations.

Thinking begins with a problem. While the general habit of inquiry is developed in the satisfaction of the instinct of curiosity, any particular investigation begins with a felt difficulty. By difficulty is not meant one of an imperative and practical kind, but any problem whether theoretical or practical. For many men, it is true, thinking occurs only when instinct and habit are inadequate to adjust them to their environment. Any problem of daily life affords an example. To borrow an illustration from Professor Dewey:

> A man traveling in an unfamiliar region comes to a branching of the roads. Having no sure knowledge to fall back upon, he is brought to a standstill of hesitation and suspense. Which road is right? And how shall the perplexity be resolved? There are but two alternatives. He must either blindly and arbitrarily take his course, trusting to luck for the outcome, or he must discover grounds for the conclusion that a given road is right.[1]

To the inquiring mind, purely theoretical difficulties or discrepancies will provoke thought. To the astronomer an unaccounted-for perturbation in the path of a planet provokes inquiry; the chemist is challenged by a curious unexplained reaction of two chemical elements, the biologist, anterior to the discovery of micro-organisms, by the putrefaction of animal tissues. The degree to which curiosity persists and the extent of training a man has had in a given field largely determine the kind of situations that will provoke inquiry. "A primrose by the river's brim" may be simply a primrose to one man, while to another, a botanist, it may suggest an interesting and complex problem of classification.

But however remote and recondite thinking becomes, how-

[1] Dewey: *How We Think*, p. 10.

ever far removed from immediate practical concerns, it occurs essentially in a situation analogous to the "forked-road situation" described above. The situation as it stands is confused, ambiguous, uncertain. In a practical problem, for example, there are two or more courses of action open to us, all of them giving promise as solutions of our difficulties. We aim through reflection to reduce the uncertainty, to clarify the situation, to discover more clearly the consequences of the various alternatives which suggest themselves to us. When action is unimpeded, suggestions flow on just as they arise in our minds. This is illustrated best in the reveries of a day-dream when casual and disconnected fancies follow each other in random and uncontrolled succession. But when there is a problem to be settled, an ambiguity to be resolved, suggestions are held in check and controlled with reference to the end we have in view; each suggestion is estimated with regard to its relevance to the problem in hand. Every idea that arises is, so to speak, queried: "Is it or is it not a solution to our present difficulty?"

We are indebted to Professor Dewey, for an analysis of the thought process. Every instance of thinking reveals five steps:

(1) A felt difficulty, (2) its location and definition, (3) suggestions of possible solutions, (4) development by reasoning of the bearings of the most promising suggestion, (5) further observation or experiment leading to its acceptance or rejection, that is a conclusion either of belief or disbelief.

When instinct or habit suffices to adjust us to our environment, action runs along smoothly, freely, uninterruptedly. In consequence the provocation to thinking may at first be a mere vague shock or disturbance. We are, as it were, in trouble without knowing precisely what the trouble is. We must carefully inquire into the nature of the problem before undertaking a solution. To take a simple instance, an automobile may suddenly stop. We know there is a difficulty, but whether it is a difficulty with the transmission, with the

carburetor, or with the supply of gasoline, we cannot at first tell. Before we do anything else in solving our problem, we find out literally and precisely *what the trouble is.* To take a different situation, a doctor does not undertake to prescribe for a patient until he has diagnosed the difficulty, found out precisely what the features of the problem are.

The second step after the situation has been examined and its precise elements defined, is *suggestion.* That is, we consider the various possibilities which *suggest* themselves as solutions to our problem. There may be several ways of temporarily repairing our engine; the doctor may think of two or three possible treatments for a disease. In one sense, suggestion is uncontrollable. The kind of suggestions that occur to an individual depend on his "genius or temperament," on his past experiences, on his hopes or fears or expectations when that particular situation occurs. We can, however, through the methods of science, control suggestions indirectly. We can do this, in the first place, by reëxamining the facts which give rise to suggestion. If upon close examination, the facts appear differently from what they did at first, we will derive different inferences from them. Different suggestions will arise from the facts A, B, C, than from the facts A', B', C'. Again we can regulate the conditions under which credence is given to the various suggestions that arise. These suggestions are entertained merely as tentative, and are not accepted until experimentally verified. "The suggested conclusion as only tentatively entertained constitutes an idea."

After the variety of suggestions that proffer themselves as solutions to a problem have been considered, the third step is the logical development of the idea or suggestion that gives most promise of solving the difficulty. That is, even before further facts are sought, the idea that gives promise of being a solution is followed out to its logical consequences. Thus, for example, astronomers were for a long time puzzled by unexplained perturbations in the path of the planet Uranus. The suggestion occurred that an unseen planet was deflecting it

from the path it should, from observation and calculation, be following. If this were the case, from the amount of deflection it was mathematically calculated, prior to any further observation, that the supposed planet should appear at a certain point in space. It was by this deductive elaboration that the planet Neptune was discovered. It was figured out deductively that a planet deflecting the path of the planet Uranus by just so-and-so much should be found at just such and such a particular point in the heavens. When the telescopes were turned in that direction, the planet Neptune was discovered at precisely the point deductively forecast.

The elaboration of an idea through reasoning it out may sometimes lead to its rejection. But in thinking out its details we may for the first time note its appositeness to the solution of the problem in hand. The gross suggestion may seem wild and absurd, but when its bearings and consequences are logically developed there may be some item in the development which dovetails into the problem as its solution. William James gives as the outstanding feature of reasoning, "sagacity, or the perception of the essence." [1] By this he meant the ability to single out of a complex situation or idea the significant or key feature. It is only by a logical development of a suggested solution to a problem that it is possible to hit upon the essence of the matter for a particular situation, to single out of a gross total situation, the key to the phenomenon. "In reasoning, *A* may suggest *B;* but *B*, instead of being an idea which is simply *obeyed* by us, is an idea which suggests the distinct additional idea *C*. And where the train of suggestion is one of reasoning distinctively so-called as contrasted with mere 'revery,' . . . the ideas bear certain inward relations to each other which we must carefully examine. The result *C* yielded by a true act of reasoning is apt to be a thing voluntarily *sought*, such as the means to a proposed end, the ground for an observed effect, or the effect of an assumed cause." [2] Thus what at first sight might

[1] James: *Psychology*, vol. II, p. 343.

[2] *Ibid.*, p. 329.

seem a fantastic suggestion may, when its bearings are logically followed out, be seen in one of its aspects to be the key to the solution of a problem. To primitive man it might have seemed absurd to suggest that flowing water might be used as power; to the man in Franklin's day that the same force that was exhibited in the lightning might be used in transportation and in lighting houses.[1]

But no thinking is conclusive until after the experimental certification and warranting of the idea which has been held in mind as the solution of the problem. By deduction, by logical elaboration of an idea, we find its adoption involves certain consequences. Some of the logical consequences which follow from an idea may indicate that it is a plausible solution of our problem. But no matter how plausible a suggestion looks, until it is verified by observation or experiment the thinking process is not concluded, is not finished, as we say, *conclusively*. When an idea or a suggestion has been developed, and seen to involve — as an idea — certain inevitable logical consequences, the idea must be tested by further observation and experiment. Suggestions arise *from* facts and must be tested *by* them. Until the suggestion is verified, it remains merely a suggestion, a theory, a hypothesis, an idea. It is only when the consequences implied logi-

[1] James gives an illuminating passage on the importance of the effectiveness of *reasoning* things out: "I have a student's lamp, of which the flame vibrates most unpleasantly unless the collar which bears the chimney be raised about a sixteenth of an inch. I learned the remedy after much torment by accident, and now always keep the collar up with a small wedge. But my procedure is a mere association of two totals, diseased object and remedy. One learned in pneumatics could have named the *cause* of the disease, and thence inferred the remedy immediately. By many measurements of triangles, one might find their area always equal to their height multiplied by half their base, and one might formulate an empirical law to that effect. But a reasoner saves himself all this trouble, by seeing that it is the essence (*pro hac vice*) of a triangle to be the half of a parallelogram whose area is the height into the entire base. To see this he must invent additional lines; and the geometer must often draw such to get at the essential properties he may require in a figure. The essence consists in some *relation of the figure to the new lines*, a relation not obvious at all until they are put in. The geometer's sagacity lies in the invention of the new lines." (*Psychology*, vol. II, pp. 339–40.)

cally in the very idea itself are found in the actual situation that the idea is accepted as a solution to the problem. Sometimes the suggestion may be verified by observation; sometimes conditions must be deliberately arranged for testing its adequacy. In either case it is only when the facts of the situation correspond to the conditions theoretically involved that the tentative idea is accepted as a conclusion.

Thus a treatment that is regarded by the doctor as a possible cure can be called an actual cure only when its beneficent results are observed. The supposition about the planet Neptune is only verified when the planet is actually observed in the heavens. Thinking ends, as it begins, in observation. At the beginning the facts are carefully examined to see precisely where the difficulty lies; at the end they are again examined to see whether an idea, an entertained hypothesis, a suggested solution, can be verified in actual observable results.

The quality of thinking — Suggestion. The quality of thinking varies, first, with the fertility of suggestion of the analyzing mind. Ease of suggestion, in the first place, depends on innate individual differences. There are some minds so constituted that every fact provokes a multitude of suggestions. Readiness in responding with "ideas" to any experience is dependent primarily on initial differences in resilience and responsiveness. But differences in training and past experience are also contributory. A man who has much experience in a given field, say in automobile repairing, will, given a difficulty, not only think of more suggestions, but think more rapidly in that field.

Again persons differ in range or number of suggestions that occur. The quality of the thinking process and of the results it produces depends, in part, on the variety of suggestions which occur to an individual in the solution of a given problem. If too few suggestions occur one may fail to hit upon any promising solution. If too many suggestions occur one may be too confused to arrive at any conclusion at all. Whether an

individual has few or many suggestions depends largely on native differences. It depends, also, however in part, on acquaintance with a given field. And the fertility of suggestions may be increased by a careful survey and re-survey of the facts at hand, and by the deliberate searching-out of further facts from which further suggestions may be derived. Suggestions differ, finally, in regard to depth or significance; by nature and by training, individuals produce ideas of varying degrees of significance in the solution of problems. Ease and versatility of suggestion not infrequently connote superficiality; to make profound and far-reaching suggestions takes time.

It is further requisite, as already pointed out, that the analyzing mind be free from prejudice. Thinking is continually qualified, as we have seen, by preferences and aversions. Every prejudice, every *a priori* belief we have, literally prejudges the inquiry. Whenever we are moved by a "predominant passion," we cannot survey the facts impartially. It is hard to think clearly and justly about people whom we love or hate, or to estimate with precision the morality of actions toward which we are moved by very strong impulses. It is only the mind that remains resolutely emancipated from the compulsions of habit and circumstances, that persists in surveying facts as they are, letting the chips, so to speak, fall where they will, that can be really effective in thinking. In the physical sciences it is comparatively easy to start with no prejudices; in social inquiries where we are bound by traditions, loyalties, and antipathies it is much more difficult.

Not the least essential to effective thinking is persistence and thoroughness of investigation. Since we are primarily creatures of action, we crave definiteness and immediacy of decision, and there is a constant temptation to rush to a conclusion. In order to attain genuine completeness of the facts and certainty and accuracy as to what the facts are, long, unwavering persistence is required. There must be persistence, moreover, not merely because of the length of time and the

amount of labor involved in the collection of data; steadiness is required in holding in mind the end or purpose of the investigation. Too often in inquiry into the facts of human relations, the specific problem is forgotten and facts are collected with an indiscriminate omnivorousness. There is in such cases plodding, but of an unenlightened and fruitless sort. Not only *persistency* but *consistency* is required. The investigation must be steadily carried on with persistent and unwavering reference to the specific business in hand.

Effective thinking depends further on familiarity with the field of facts under investigation. Even the most ready and fertile of minds, the most orderly habits of thought, are at a loss without a store of material; that is, facts from which suggestions may arise. And this store of materials can only be attained through a thoroughgoing acquaintance with the particular field of inquiry. Thinking aims to explain the relations between facts, and an intimate acquaintance with facts involved in a given situation is prerequisite to any generalization whatsoever.

While the native fertility of given minds cannot be controlled, suggestions can be controlled indirectly. Suggestions arise from the data at hand, but the data themselves change under more precise conditions of observation, and the suggestions that arise from them change in consequence. The whole elaborate apparatus of science, its instruments of precision, are designed to yield an exact determination of the precise nature of the data at hand. The scientist attempts to prevent "reading-in" of meanings. "Reading-in" of meanings may be due to various causes. In the first place there may be purely physical causes: a dim light, a fog, a cracked window-pane are examples of how ordinary observation may lead us astray. Again, physiological causes may be at work to distort sensations: imperfections in the sense organs, fatigue, illness, and the like are examples. But not least among the causes of error must be set psychological causes. That is, we read facts differently in the light of what we fear or hope,

like or dislike, expect or recall. We see things the way we want them to be, or the way previous experience has taught us to expect them to be.

Both physiological and psychological causes may be checked up by instruments. Indeed, one of the chief utilities of instruments of precision is that they do serve to check up personal error. They prevent scientific inquirers from reading in meanings to which they are led by hope, fear, preference, or aversion. They help us to see the facts as they are, not as for various social and personal reasons we want or expect them to be. They help to give precise and permanent impressions which are not dependent for their discovery or for their preservation on the precariousness of human observation or memory.

Classification. Next only in importance to accurate observation of the facts is their classification. Objects of experience as they come to us through the senses appear in a sequence which is random and chaotic. But in order to deal effectively with our experience we must arrange facts according to their likenesses and differences. Whenever we discover certain striking similarities between facts, we classify them, place them in a class, knowing that what will apply to one will apply to all. Some logicians go so far as to say that science cannot go any further than accurate classification. In the words of Poincaré:

> The most interesting facts are those which may serve many times; these are the facts which have a chance of coming up again. We have been so fortunate as to have been born in a world where there are such. Suppose that instead of sixty chemical elements there were sixty milliards of them, that they were not some common, the others rare, but that they were equally distributed. Then, every time we picked up a new pebble there would be great probability of its being formed of some unknown substance; all that we knew of other pebbles would be worthless for it; before each new object we should be as the new-born babe; like it we could only obey our caprices or our needs. Biologists would be just as much at a loss if there were only individuals and no species, and if heredity did not make sons like their fathers.[1]

[1] Poincaré: *Foundations of Science*, p. 363.

The aim of classification in science is grouping in such a way as to make manifest at once similarities in the behavior of objects. That characteristic is selected as a basis of classification with which is correlated the greatest number of other characteristics belonging to the facts in question. It would be possible to classify all living things according to color, but such a classification would be destitute of scientific value. Biology offers some interesting examples of how an illuminating classification may be made on the basis of a single characteristic. It has been found, for example, that the differences or resemblances of animals are correlated with corresponding differences or resemblances in their teeth. In general, the function of classification may be summarized in Huxley's definition as modified by Jevons:

> By the classification of any series of objects is meant the actual or ideal arrangement together of those things which are like and the separation of those things which are unlike, the purpose of the arrangement being, primarily, to disclose the correlations or laws of union of properties and circumstances, and, secondarily, to facilitate the operations of the mind in clearly conceiving and retaining in memory the characters of the object in question.

It should be noted that the object of classification is not simply to indicate similarities but to indicate distinctions or differences. In scientific inquiry, differences are as crucial in the forming of generalizations as similarities. It is only possible to classify a given fact under a scientific generalization when the given fact is set off from other facts, when it is seen to be the result of certain special conditions.

> If a man infers from a single sample of grain as to the grade of wheat of the car as a whole, it is induction, and under certain circumstances, a *sound* induction; other cases are resorted to simply for the sake of rendering that induction more guarded and correct. In the case of the various samples of grain, it is the fact that the samples are unlike, at least in the part of the carload from which they are taken, that is important. Were it not for this unlikeness, their likeness in quality would be of no avail in assisting inference.[1]

[1] Dewey: *How We Think*, pp. 89–90.

Experimental variation of conditions. In forming our generalizations from the observation of situations as they occur in Nature, we are at a disadvantage. If we observe cases just as we find them, there is much present that is irrelevant to our problem; much that is of genuine importance in its solution is hidden or obscure. In experimental investigation we are, in the words of Sir John Herschel, "active observers"; we deliberately invent crucial or test cases. That is, we deliberately arrange conditions so that every factor is definitely known and recognized. We then introduce into this set of completely known conditions one change, one new circumstance, and observe its effect. In Mill's phrase, we "take a phenomenon home with us," and watch its behavior. Mill states clearly the outstanding advantage of experimentation over observation:

> When we can produce a phenomenon artificially, we can take it, as it were, home with us, and observe it in the midst of circumstances with which in all other respects we are accurately acquainted. If we desire to know what are the effects of the cause *A*, and are able to produce *A* by means at our disposal, we can generally determine at our own discretion . . . the whole of the circumstances which shall be present along with it; and thus, knowing exactly the simultaneous state of everything else which is within the reach of *A's* influence, we have only to observe what alteration is made in that state by the presence of *A*.
>
> For example, by the electric machine we can produce, in the midst of known circumstances, the phenomena which Nature exhibits on a grander scale in the form of lightning and thunder. Now let any one consider what amount of knowledge of the effects and laws of electric agency mankind could have obtained from the mere observation of thunderstorms, and compare it with that which they have gained, and may expect to gain, from electrical and galvanic experiments. . . .
>
> When we have succeeded in isolating the phenomenon which is the subject of inquiry, by placing it among known circumstances, we may produce further variations of circumstances to any extent, and of such kinds as we think best calculated to bring the laws of the phenomenon into a clear light. By introducing one well-defined circumstance after another into the experiment, we obtain assurance

of the manner in which the phenomenon behaves under an indefinite variety of possible circumstances. Thus, chemists, after having obtained some newly discovered substance in a pure state, . . . introduce various other substances, one by one, to ascertain whether it will combine with them, or decompose them, and with what result; and also apply heat or electricity or pressure, to discover what will happen to the substance under each of these circumstances.[1]

Through experiment, we are thus enabled to observe the relation of specific elements in a situation. We are, furthermore, enabled to observe phenomena which are so rare in occurrence that it is impossible to form generalizations from them or improbable that we should even notice them: "We might have to wait years or centuries to meet accidentally with facts which we can readily produce at any moment in a laboratory; and it is probable that many of the chemical substances now known, and many excessively useful products, would never have been discovered at all, by waiting till Nature presented them spontaneously to our observation." And phenomena, such as that of electricity, which can only be understood when the conditions of their occurrence are varied, are presented to us in Nature most frequently in a fixed and invariable form.

Generalizations, their elaboration and testing. So far we have been concerned with the steps in the control of suggestion, the reëxamination of the facts so that significant suggestions may be derived, and the elimination of the significant from the insignificant in the elements of the situation as it first confronts us. In logically elaborating a suggestion, as we have already seen, we trace out the bearings of a given situation. We expand it; we see what it *implies*, what it *means*. Thus, if we came, for example, to a meeting that had been scheduled, and found no one present, we might have several solutions arise in our minds. The meeting, we might suppose, had been transferred to another room. If that were the case, there would probably be some notice posted. In all cases of deductive elaboration, we go through

[1] Mill: *Logic* (London, 1872), vol. I, pp. 441–42.

what might be called the If-Then process. If *such-and-such* is the case, then *such-and-such* will follow. We can then verify our suggested solution to a problem, by going back to the facts, to see whether they correspond with the implications of our suggestion. We may, to take another example, think that a man who enters our office is an insurance agent, or a book solicitor who had said he would call upon us at a definite date. If such is the case, he will say such-and-such things. If he does say them, then our suggestion is seen to be correct. The advantages of developing a suggestion include the fact that some link in the logical chain may bear a more obvious relation to our problem than did the undeveloped suggestion itself.

The systematic sciences consist of such sets of principles so related that any single term implies certain others, which imply certain others and so on *ad infinitum*.

After the facts have been elaborated, the generalization, however plausible it may seem, must be subjected to experimental corroboration. That is, if a suggestion is found through local elaboration to mean *A*, *B*, *C*, then the situation must be reëxamined to see if the facts to be found tally with the facts deduced. In the case cited, the suggestion that the man who entered the room was the insurance agent we expected would be verified if he immediately broached the subject and the fact, say, of a previous conversation. In the case of disease, if the illness is typhoid, we shall find certain specific conditions in the patient. If these are found, the suggestion of typhoid is verified.

The *reliability* of generalizations made by this scientific procedure varies according to several factors. It varies, in the first place, according to the correspondence of the predictions made on the basis of the generalization, with subsequent events. The reason we say the law of gravitation holds true is because in every instance where observations or experiments have been made, the results have tallied precisely with expectations based upon the generalization. We can, to

a certain extent, determine the reliability of a generalization before comparing our predictions with subsequent events. If a generalization made contradicts laws that have been established in so many instances that they are practically beyond peradventure, it is suspect. A law, for example, that should be an exception to the laws of motion or gravitation, is *a priori* dubious.

If an induction conflicts with stronger inductions, or with conclusions capable of being correctly deduced from them, then, unless on reconsideration it should appear that some of the stronger inductions have been expressed with greater universality than their evidence warrants, the weaker one must give way. The opinion so long prevalent that a comet, or any other unusual appearance in the heavenly regions, was the precursor of calamities to mankind, or to those at least who witnessed it; the belief in the veracity of the oracles of Delphi or Dodona; the reliance on astrology, or on the weather prophecies in almanacs, were doubtless inductions supposed to be grounded on experience. . . . What has really put an end to these insufficient inductions is their inconsistency with the stronger inductions subsequently obtained by scientific inquiry, respecting the causes on which terrestrial events really depend.[1]

The quantitative basis of scientific procedure. Science *is* science, some scientists insist, in so far as it is mathematical. That is, in the precise determination of facts, and in their repetition with a view to their exact determination, quantities must be known. The sciences have developed in exactness, in so far as they have succeeded in expressing their formulations in numerical terms. The physical sciences, such as physics and chemistry, which have been able to frame their generalizations from precise quantities, have been immeasurably more certain and secure than such sciences as psychology and sociology, where the measurement of exact quantities is more difficult and rare. Jevons writes in his *Principles of Science:*

As physical science advances, it becomes more and more accurately quantitative. Questions of simple logical fact resolve themselves

[1] Mill: *Logic* (London, 1872), vol. I, pp. 370–71.

after a while into questions of degree, time, distance, or weight. Forces hardly suspected to exist by one generation are clearly recognized by the next, and precisely measured by the third generation.[1]

The history of science exhibits a constant progress from rude guesses to precise measurement of quantities. In the earliest history of astronomy there were attempts at quantitative determinations, very crude, of course, in comparison with the exactness of present-day scientific methods.

Every branch of knowledge commences with quantitative notions of a very rude character. After we have far progressed, it is often amusing to look back into the infancy of the science, and contrast present with past methods. At Greenwich Observatory in the present day, the hundredth part of a second is not thought an inconsiderable portion of time. The ancient Chaldæans recorded an eclipse to the nearest hour, and the early Alexandrian astronomers thought it superfluous to distinguish between the edge and center of the sun. By the introduction of the astrolabe, Ptolemy, and the later Alexandrian astronomers could determine the places of the heavenly bodies within about ten minutes of arc. Little progress then ensued for thirteen centuries, until Tycho Brahe made the first great step toward accuracy, not only by employing better instruments, but even more by ceasing to regard an instrument as correct. . . . He also took notice of the effects of atmospheric refraction, and succeeded in attaining an accuracy often sixty times as great as that of Ptolemy. Yet Tycho and Hevelius often erred several minutes in the determination of a star's place, and it was a great achievement of Roemer and Flamsteed to reduce this error to seconds. Bradley, the modern Hipparchus, carried on the improvement, his errors in right ascension, according to Bessel, being under one second of time, and those of declination under four seconds of arc. In the present day the average error of a single observation is probably reduced to the half or the quarter of what it was in Bradley's time; and further extreme accuracy is attained by the multiplication of observations. and their skilful combination according to the theory of error. Some of the more important constants . . . have been determined within a tenth part of a second of space.[2]

The precise measurement of quantities is important because we can, in the first place, only through quantitative determinations be sure we have made accurate observations, observa-

[1] Jevons: *Principles of Science*, p. 270. [2] *Ibid.*, pp. 271–72.

tions uncolored by personal idiosyncrasies. Both errors of observation and errors of judgment are checked up and averted by exact quantitative measurements. The relations of phenomena, moreover, are so complex that specific causes and effects can only be understood when they are given precise quantitative determination. In investigating the solubility of salts, for example, we find variability depending on differences in temperature, pressure, the presence of other salts already dissolved, and the like. The solubility of salt in water differs again from its solubility in alcohol, ether, carbon, bisulphide. Generalization about the solubility of salt, therefore, depends on the exact measurement of the phenomenon under all these conditions.[1]

The importance of exact measurement in scientific discovery and generalization may be illustrated briefly from one instance in the history of chemistry. The discovery of the chemical element *argon* came about through some exact measurements by Lord Rayleigh and Sir William Ramsay of the nitrogen and the oxygen in a glass flask. It was found that the nitrogen derived from air was not altogether pure; that is, there were very minute differences in the weighings of nitrogen made from certain of its compounds and the weight obtained by removing oxygen, water, traces of carbonic acid, and other impurities from the atmospheric air. It was found that the very slightly heavier weight in one case was caused by the presence of argon (about one and one third times as heavy as nitrogen) and some other elementary gases. The discovery was here clearly due to the accurate measurement which made possible the discovery of this minute discrepancy.

It must be noted in general that accuracy in measurement is immediately dependent on the instruments of precision available. It has frequently been pointed out that the Greeks, although incomparably fresh, fertile, and direct in their thinking, yet made such a comparatively slender contribution to scientific knowledge precisely because they had no instruments

[1] See Jevons, p. 279 ff.

for exact measurement. The thermometer made possible the science of heat. The use of the balance has been in large part responsible for advances in chemistry.

The degree to which sciences have attained quantitative accuracy varies among the physical sciences. The phenomena of light are not yet subject to accurate measurement; many natural phenomena have not yet been made the subject of measurement at all. Such are the intensity of sound, the phenomena of taste and smell, the magnitude of atoms, the temperature of the electric spark or of the sun's atmosphere.[1]

The sciences tend, in general, to become more and more quantitative. All phenomena "exist in space and involve molecular movements, measurable in velocity and extent." The ideal of all sciences is thus to reduce all phenomena to measurements of mass and motion. This ideal is obviously far from being attained. Especially in the social sciences are quantitative measurements difficult, and in these sciences we must remain therefore at best in the region of shrewd guesses or fairly reliable probability.

Statistics and probability. While in the social sciences, exact quantitative measurements are difficult, they are to an extent possible, and to the extent that they are possible we can arrive at fairly accurate generalizations as to the probable occurrence of phenomena. There are many phenomena where the elements are so complex that they cannot be analyzed and invariable causal relations established.

> In a study of the phenomena of the weather, for example, the phenomena are so exceedingly complex that anything approaching a complete statement of their elements is quite out of the question. The fallibility of most popular generalizations in these fields is evidence of the difficulty of dealing with such facts. Must we be content then simply to guess at such phenomena? . . . In instances of this sort, another method . . . becomes important: The Method of Statistics. In statistics we have an *exact* enumeration of cases. If a small number of cases does not enable us to detect the causal relations of a phenomenon, it sometimes happens that a large number,

[1] See Jevons, p. 273.

accurately counted, and taken from a field widely extended in time and space, will lead to a solution of the problem.[1]

If we find, in a wide variety of instances, two phenomena occurring in a certain constant correlation, we infer a causal relation. If the variations in the frequency of one correspond to variations in the frequency of the other, there is probability of more than connection by coincidence.

The correlation between phenomena may be measured mathematically; it is possible to express in figures the exact relations between the occurrence of one phenomenon and the occurrence of another. The number which expresses this relation is called the coefficient of correlation. This coefficient expresses relationship in terms of the mean values of the two series of phenomena by measuring the amount each individual phenomenon varies from its respective mean. Suppose, for example, that in correlating crime and unemployment, the coefficient of correlation were found to be .47. If in every case of unemployment crime were found and in every case of crime, unemployment, the coefficient of correlation would be +1. If crime were never found in unemployment, and unemployment never in crime, the coefficient of correlation would be −1, indicating a perfect inverse relationship. A coefficient of 0 would indicate that there is no relationship. The coefficient of .47 would accordingly indicate a significant but not a "high" correlation between crime and unemployment.

We cannot consider here all the details of statistical methods, but attention may be called to a few of the more significant features of the process. Statistics is a science, and consists in much more than the mere counting of cases.

With the collection of statistical data, only the first step has been taken. The statistics in that condition are only raw material showing nothing. They are not an instrument of investigation any more than a kiln of bricks is a monument of architecture. They need to

[1] Jones: *Logic, Inductive and Deductive*, p. 190.

be arranged, classified, tabulated, and brought into connection with other statistics by the statistician. Then only do they become an instrument of investigation, just as a tool is nothing more than a mass of wood or metal, except in the hands of a skilled workman.[1]

The essential steps in a statistical investigation are: (1) the collection of material, (2) its tabulation, (3) the summary, and (4) a critical examination of the results. The terms are almost self-explanatory. There are, however, several general points of method to be noted.

In the collection of data a wide field must be covered, to be sure that we are dealing with invariable relations instead of with mere coincidences, "or overemphasizing the importance of one out of a number of coöperating causes." Tabulation of the data collected is very important, since classification of the data does much to suggest the causal relations sought. The headings under which data will be collected depend on the purposes of the investigation. In general, statistics can suggest generalizations, rather than establish them. They indicate probability, not invariable relation.[2]

Science as an instrument of human progress. We have, in an earlier section of this chapter, referred to the practical value of science. "Man's power of deliberate control of his own affairs depends upon ability to direct energies to use; an ability which is, in turn, dependent upon insight into nature's processes. Whatever natural science may be for the specialist, . . . it is knowledge of the conditions of human action." [3] And the wider, the more complete and the more penetrating our knowledge of the world in which we live, the more extended become the boundaries of human action. Through a knowledge of natural processes, men have passed from a frightened subjection to Nature to its conscious control. And the fruits of that control are, as we have already had occasion to notice, all-pervading in practical life. That complete transformation of life known as the Industrial Revolution,

[1] Mayo-Smith: *Statistics and Sociology*, p. 18.
[2] See Jones: *Logic*, pp. 213–25, for a discussion of Probability.
[3] Dewey: *Democracy and Education*, p. 267.

which came about with such swiftness and completeness in the early nineteenth century, and whose effects have not yet ceased to accumulate, was the direct outcome of the application of the experimental science which had begun in the sixteenth. Some of the consequences of the application of theoretical investigation to practical life have already been noted. There are first the more obvious facts of the inventions, great and small — the railways, steamships, electric transportation, automobiles, and telephones — which have changed in countless details our daily life. There are the profound and all-pervasive changes which have been brought about in industrial and social relations: the building-up of our vast industrial centers, the change from small-scale handicrafts to large-scale machine production, the factory system, with its concomitants of immensely increased resources and immensely complicated problems of human life. Science in the short span of three centuries has shown how rapid and immediate could be the fruits of human control of Nature, and its further fruits are incalculable.

Science has indeed already begun to affect men's attitude towards experience as well as their material progress. It is only when men set out with the conscious realization that intelligence does make a difference in the world, that science becomes articulate. Science is the guarantee of progress. It has shown men that the future is to some extent in their own hands; that by dint of a laborious and detailed application of intelligence to the processes of nature, those processes can be controlled in the interests of human welfare.

> Science has led men to look to the future instead of the past. The coincidence of the ideal of progress with the advance of science is not a mere coincidence. Before this advance men placed the golden age in remote antiquity. Now they face the future with a firm belief that intelligence properly used can do away with evils once thought inevitable. To subjugate devastating disease is no longer a dream; the hope of abolishing poverty is not Utopian.[1]

[1] Dewey: *Democracy and Education*, pp. 262–63.

But science may be used for any end. It reveals the relations of phenomena, relations which hold for all men. It shows what causes are connected with what consequents, and, as already pointed out, in the knowledge of causes lies the possible control of effects. We can secure the results we desire, by discovering what antecedents must first be established. Science is thus a fund of common resources. Specific causes are revealed to be connected with specific effects, and men, by making a choice of antecedents, can secure the consequences they desire. But which effects they will desire depends on the instincts, standards, and habits of the individual, and the traditions and ideals of the group. A knowledge of chemistry may be used for productive industrial processes, or in the invention of poison gas. Expert acquaintance with psychology and educational methods may be used to impress upon a nation an arbitrary type of life (an accusation justly brought against the Prussian educational system), or to promote the specific possibilities that each individual displays.

Not only are the fruits of scientific inquiry used in different ways by different individuals and groups, but scientific inquiry is itself affected by the prevailing interests and mode of life. What inquiries shall be furthered depends on *what* the individual or group feels it important to know. From a social point of view, certain scientific developments are of more urgency and imperativeness than others. During an emergency, as during the Great War, it might be necessary to turn all the energies of scientific men into immediately productive pursuits. And, since the pursuit of inquiry on a large scale demands large resources, those researches which give promise of beneficent human consequences will the more readily command social sanction and approval and will be developed at the expense of more remote speculations however intrinsically interesting these latter may be.

Science has proved so valuable a human instrument that it has attained a moral responsibility. Men have increasingly come to realize that the pressing problems of our industrial

life require for their solution not the confusions and incompetences of passion and prejudice, but an application of the fruits of scientific inquiry. Science has already so completely demonstrated its vast fruitfulness in human welfare, that it must be watched with jealous vigilance. It must result as it began, in the improvement of human welfare.[1] But what constitutes human welfare is a question which leads us into the final activity of the Career of Reason, Morals and Moral Valuation, man's attempt to determine what happiness is, and how he may attain it.

[1] We have already noted the danger of too complete a commitment of science to immediately practical results. This narrows instead of broadening possibility. As Mr. F. P. Keppel points out in a recent article, "Scholarship in War" (*Columbia University Quarterly*, July, 1919), some of the most important and immediately practical contributions during the Great War came from the ranks of those who would be regarded as "pure theorists."

CHAPTER XV

MORALS AND MORAL VALUATION

The pre-conditions of morality — Instinct, impulse, and desire. In Art and Science, man attempts to transform the world of nature into conditions more in conformity with his desires. In the enterprise of Morals, man attempts to discover how to control his own nature in the attainment of happiness. We have already had occasion to see that Art, in the broad sense of human contrivance, is made necessary by the incongruity between nature and human nature. We shall examine now the conditions which make it necessary and make it possible for man to consider and to control those elementary impulses with which he is endowed.

The origin of the moral problem will become clearer after a brief recapitulation of those elements of original nature which form the basis of all human action. We have seen that human beings are equipped, apart from education or training, with certain tendencies to act in certain definite ways, given certain definite stimuli. Any single activity of an average human being in a modern civilized community is compounded of so many modifications of original tendencies to action that these latter seem often altogether obliterated. The conditions of civilized life, moreover, place continual checks on the free activity of any given impulse, and there are so many stimuli playing upon an individual at once that the responses called out tend to inhibit each other. The particular thing we say to an acquaintance we happen to meet is not determined by a single original impulse, by love or hate, fear or sympathy, pugnacity or pity. It is a compound of some or of most of these. On the other hand, no matter how complicated or sophisticated human action becomes, it is built out of these same impulses, which were

operative when human beings had not yet passed out of savagery. We may check and control our responses through habitual repressions, through deliberate forethought, through conscious or mechanical acquiescence in the ways of the group among which we live. But these original impulses are still the mainspring of our activities.

The complex, highly artificial character of our civilization often obscures the presence of these powerful instinctive tendencies, but that they *are* present and powerful several facts bear witness. They manifest themselves, as the newer psychology of the subconscious has repeatedly pointed out, in roundabout ways; they are, in the technical phrase, sublimated. Instincts find, as it were, substitute realizations. This process of sublimation of unfulfilled desire has been noted particularly with regard to the sex instinct, but the principle applies to the others.

The continual suppression of instincts results in various forms of morbidity, in what Graham Wallas calls "baulked dispositions." To say that instincts are repressed, is to say there is a maladjustment between the individual as he comes into the world, and the world as he finds it. This maladjustment may vary in intensity. It may be exhibited in nothing more serious than boredom, or petulance, or hyper-sensitiveness. It may be a chronic sense of not fitting in, of being lost in a blind alley. One has but to review one's list of acquaintances to see how many people there are who feel somehow frustrated in the work they happen to be doing, who feel themselves inexplicably at odds with the world. Graham Wallas well describes the situation when he writes:

> For we cannot in Saint Paul's sense mortify our dispositions. If they are not stimulated, they do not therefore die, nor is the human being what he would be if they had never existed. If we leave unstimulated, or, to use a shorter term, if we "baulk" any one of our main dispositions, Curiosity, Property, Trial and Error, Sex, and the rest, we produce in ourselves a state of nervous strain. It may be desirable in any particular case of conduct that we should do so, but we ought to know what we are doing.

The baulking of each disposition produces its own type of strain; but the distinctions between the types are, so far, unnamed and unrecognized, and a trained psychologist would do a real service to civilized life if he would carefully observe and describe them.[1]

The presence of instinctive activities is seen in stark immediacy and directness every now and then in civilized life. Lynchings and mob violence in general are illustrations of what happens when groups throw to the winds the multiple inhibitions of custom and law. And the records of the criminal courts exhibit more cases than are commonly realized of sheer crimes of violence. In some instances these can be set down as pathological, but in many more they are normal instincts breaking through the fixed channels set by public opinion, tradition, and legal compulsion. On a smaller scale an outburst of anger, a fit of temper, sulk or spleen, exhibits the enduring though often obscured presence of instinctive tendencies in civilized life.

The conflict of interests between men and groups. How comes it, then, that men whose whole activity is a complication of these powerful original tendencies to action should not follow these native impulses freely? The answer is that men not only live, but live together. Wherever human wants, as in any group, even a small one, must be filled through cooperation, accommodation, compromise, give-and-take, adjustment must be made. "Man," to adapt Kant's phrase, "cannot get on with his fellows; and he cannot get on without them." Other men are necessary to help us fulfill our desires, and yet our desires conflict with theirs. The dual fact of cooperation and conflict is, in a sense, the root of the moral problem. How is one individual to attain happiness without at the same time interfering with the happiness of others? How can the desires with which all men come into the world be fulfilled for all men?

The adjustment of these problems is at once complicated and facilitated by the fact that one of man's most powerful

[1] Wallas: *The Great Society*, p. 65.

native desires is, as we have already seen, his desire to please other men. This extreme sensitivity to the praise and blame of his fellows operates powerfully to qualify men's other instincts. The ruthlessness with which men might otherwise fulfill their desires is checked by the fact that within themselves there is a conflict between the desire to win other sorts of gratification, and the desire to win the praise of others and to avoid their blame. This is simply one instance of what we shall have occasion presently to note, that not only is there a conflict between men in the fulfillment of their native instincts, but within individuals an adjustment must be made between competing impulses themselves.

The kinds of conflict that occur between men in the fulfillment of their original native tendencies, are as various as those tendencies and their combinations. It may be a conflict, as in primitive life, between individuals seeking food from the same source. It may be a clash in the pursuit of one form or another of self-enhancement, enhancement which can come to only some individual out of a group. The sex instinct has afforded, in the case of the "eternal triangle," an example of the sharing by two people of an imperious desire for precisely the same object of satisfaction. These conflicts of interest are an inevitable result of the constitution of human nature. It is perfectly natural that human beings constituted with largely identical impulses should not infrequently seek identical satisfactions. Groups as well as individuals may come into collision, and for analogous reasons. Class divisions over the distribution of wealth, international wars over the distribution of territory, are sufficiently familiar examples.

The levels of moral action — Custom — The establishment of "folkways." No anthropologist seems to have discovered anywhere individuals living totally alone or in total oblivion to the needs or interests of others. The human necessity for coöperation and the human desire for companionship bring individuals together. And individuals, once living

together, find some *modus vivendi*. Adjustments are, in general, effected through established and authoritative "folkways." [1] That is, certain acts come to be recognized as sanctioned or as disapproved by the group. And these sanctions or disapprovals are powerful in the control of human action. The fact that individuals live and must live together is thus the surest guarantee that they will not, once they have grown old enough to communicate with other people, altogether follow their immediate capricious desires.

The reason for the power of social approvals and disapprovals over individuals lies partly in the fact, already noted, of the human being's extremely high sensitivity to the praise and blame of others. But part of the explanation is social rather than psychological. Even primitive tribes take special pains to make public and pervasive the commands and prohibitions which have become affixed to given acts. The mere fact that an act *is* customary is itself a sufficiently strong guarantee that it will be practiced, since the human being tends to perform, as he likes to perform, the habitual. But in primitive life, the enforcement of custom is not left to the influence of habit. The prohibitions and sanctions, both in savage and in civilized society, are made into law. In the former instance, there are most elaborate devices and institutions for enforcing the traditional approvals and disapprovals. Tabus are one important instrument of the enforcement of social checks upon individual action; "tabus are perhaps not so much a means for enforcing custom as they are themselves customs invested with peculiar and awful sanction. They prohibit or ban any contact with certain persons or objects under penalty of danger from unseen beings."

Through ritual certain acts come to be performed with great regularity, thoroughness, detail, and solemnity. "In primitive life it [ritual] is widely and effectively used to insure for educational, political, and domestic customs obedience to

[1] Professor Sumner's convenient term.

the group standards." In contemporary life, certain social forms and observances, as well as certain religious ceremonies, are examples of the enforcement of given acts, by ritual.

Praise and blame are equally effective enforcements of certain types of action and of the avoidance of others. In primitive life, praise is as likely as not to take the form of art — decorations, costumes, songs, and tattoos. In modern life, as we have seen, praise and blame take the form of public opinion, as expressed by friends, acquaintances, newspapers, and the like.[1] Praise and blame are not so fixed and rigid in civilized communities; individuals move freely among diverse groups whose standards differ. But group approval is none the less effective.

In primitive life and, though less patently, in contemporary society, physical force is the ultimate power for enforcing custom. Primitive chiefs are usually the strong men of the tribes; and behind law in modern social organization is the physical power of the State to enforce it.

Morality as conformity to the established. The beginning of morals is thus to be found in conformity to the established or customary. The criterion of morality is compliance — compliance with the regular, the socially approved, the common (that is, the communal) ways of action. Apart from the consequences of violation, violation *per se* is impure, unholy, immoral. The terms are, in some cases, interchangeable. In primitive life, violations are regarded with particular horror, because they are frequently held to be not only infringements of established ways of the tribe, but as offenses against the gods, offenses which involve the whole tribe in the retributive punishments of the gods. Violation of the customary may, indeed, apart from arousing intellectual disapproval, provoke a genuine revulsion of feeling on the part of a group which has acquired certain fixed habits. We still feel emotionally shocked by the infringement of a custom that we do not intellectually value highly. If we examine our

[1] See page 106.

moral furniture we find it made up of an immense number of early acquired inhibitions or "checks." These not only prevent us from violating, at least without qualms, standards to which we have early been trained; they make deviations or irregularities on the part of others appear as "immoral," even before or without our intellectually classifying them as such. There are adults, for example, who cannot outgrow the feeling to which they have early been habituated, that card-playing at any time, or baseball-playing on Sunday, is "evil," even though they are no longer intellectually affected by scruples in those respects. There is significance in the fact that by speaking of "irregularities" in a man's conduct, we signify or imply moral disapproval.

The group, in any stage of civilization, rewards in some form conformity to group standards, and punishes infringements of them. Punishment may be nothing more tangible than disrepute or ostracism; it may be as serious as execution. Reward may range from a decoration or a chorus of praise to all forms of compensation in the way of wealth, rank, and power.

We have noted how sanctions and prohibitions are made public and effective among the members of a group. But it is further regarded as important by the group that these customs, positive and negative, should be handed down from the current to succeeding generations. In primitive life transmission of the traditional practices is made a very special occasion in the form of initiation ceremonies.

> [Initiation ceremonies] are held with the purpose of inducting boys into the privileges of manhood and into the full life of the group. They are calculated at every step to impress upon the initiate his own ignorance and helplessness in contrast with the wisdom and power of the group; and as the mystery with which they are conducted imposes reverence for the elders and the authorities of the group, so the recital of the traditions and performances of the tribe, the long series of ritual acts, common participation in the mystic dance and song and decorations, serve to reinforce the ties that bind the tribe.[1]

[1] Dewey and Tufts: *Ethics*, pp. 57–58.

In civilized life, the whole institution of education, as has been repeatedly emphasized in these pages, is designed to transmit to the young those habits of thought, feeling, and action which their influential elders wish to perpetuate. As was noted in connection with man's gregariousness, the normal becomes the "respectable," the regular becomes the "proper." We still speak of things that it is not "nice" to do. This tendency to identify the moral with the customary is brought about through early habituating the members of the group to the group standards and securing for them thereby the emotional support that goes with all habitual action.

Morality at this stage is clearly social in its origins and its operations. The standards are group standards, and the individual's single duty is obedience and conformity to the established social sanctions.

The values of customary morality. The problem of morals begins, as we have seen, in the collision of interests of similarly constituted individuals living together. Adjustments of conflicting interests are effected by group standards more or less consciously transmitted and enforced by education, public opinion, and law. We shall note presently that reflection operates to modify and criticize these customary approvals and disapprovals and to substitute more effective standards. But whether on the level of custom or reflection, the moral problem is essentially a *social* problem, the problem of the adjustment of the desires of individuals living together. For an individual living altogether alone in the world there could hardly be a moral problem, a question of "ought." There might be problems of how to attain satisfaction, but no sense of duty or moral obligation. Custom is the first great stage through which morality passes, and the only form in which morality exists for many people. In civilized life there is, to be sure, considerable reflection and querying of custom, but for the vast majority of men "right" and "wrong" are determined by the standards to which their early education

and environment have accustomed them. In primitive life, reflective criticism on the part of the individual is almost unknown, and custom remains the great arbiter of action, the outstanding source of social and moral control.

The values of custom as a moral force are, in both primitive and civilized life, notable and not to be despised. Custom is, in the first place, frequently rational in its origin. That is, in general, those acts are made habitual in the group which are associated with the general welfare. The customary is the "right," but those activities most frequently come to be regarded as "right" which are favorable to the welfare of the group. In the literal struggle for existence which characterizes primitive life, those tribes may alone be expected to survive whose customs do promote the welfare of their members. Persistence by a group in customs like infanticide or excessive restriction of population will result in their extinction. Customs are, for the most part, standards of action established in the light of the conceptions of well-being as understood at the time of their origin. The intensity with which they are maintained, enforced, and transmitted is an indication of how supremely and practically important they are regarded by primitive groups.

Custom is valuable, if for nothing else, in the fact that it makes possible some accommodation or adjustment of competing individual interests — and on the basis of a widely considered social welfare. Customs are *social*, they are binding on all; they apply to all, and to the extent that they do promote welfare, they promote, within limits, the welfare of all. A man conforming to custom is thereby consulting something other than his arbitrary caprice or personal desire. On the level of customary morality, action through conformity to custom is referred to a wider context than unconsidered individual impulse; it is, for better or worse, performed with reference to the group with whose standards it is in conformity. It is the beginning of the socialization of human interests. Though unconsciously, the man con-

forming to a custom is considering his fellows, and the values and traditions which have become current among them.

Customs, moreover, are the first invasion of moral chaos. They establish enduring standards; they give common and permanent bases of action. It is only through the establishment and transmission of customary standards that one generation is in any way superior to its predecessors. Customs, in civilized life, include all the established effective ways of civilization, its arts, its sciences, its industries, and its useful modes of coöperation.

If a plague carried off the members of a society all at once, it is obvious that the group would be permanently done for. Yet the death of each of its constituent members is as certain as if a plague took them off all at once. But the graded difference in age, the fact that some are born as some die, makes possible through transmission of ideas and practices the constant reweaving of the social fabric. Yet this renewal is not automatic. Unless pains are taken to see that genuine and thorough transmission takes place, the most civilized group will relapse into barbarism and then into savagery.[1]

In all levels of civilization, there is a conscious transmission of those social habits which are regarded as of importance. If this transmission were suddenly to cease, not only would each generation have to start afresh, but it would be altogether impossible for it to grow to maturity.

The defects of customary morality. While custom is thus valuable as a moral agent in establishing standards of social life and rendering them continuous and enduring, a morality that is completely based upon it has serious defects. Though customs may start as allegedly or actually useful practices, they tend, so strong is the influence of habit over the individual, to outlive their usefulness, and may become, indeed, altogether disadvantageous conventions. "Dr. Arthur Smith tells of the advantage it would be in some parts of China to build a door on the south side of the house, in order to get the breeze, in hot weather." The simple and sufficient

[1] Dewey: *Democracy and Education*, p. 4.

answer to such a suggestion is, "We don't build doors on the south side."

We have but to examine our own civilization to see that there are many customs which are practiced not for any good assignable reason, but simply because they have become fixed and traditional. This is not to say that everything that has become "merely conventional" is evil. It is to suggest how, even in civilized society, groups may fall into modes of action that are practiced simply because they *have been* practiced, rather than from any reasoned consideration that they *should* be. An illustration may be taken from the experience of civilians drawn into the military routine during the Great War. Men engaged in war work at Washington in civilian capacities reported repeatedly their impatience at the "red tape" of tradition with which certain classes of business were conducted by the military establishment. In law also, progressive practitioners and students have pointed out the well-known fact of the immense and beclogging ritual which has come to surround legal procedure. It is the contention of critics of one or another of our contemporary social habits and institutions that traditionalism, the persistence of custom simply because it *is* custom, is responsible for many of the anachronisms in our social, political, and industrial life. Space does not permit here a detailed consideration of this question, but it must be noted that social habits, when they are acquired, as they are, unreflectively by the vast majority of people, will tend to be repeated and supported, apart from any consideration of their consequences. This tendency toward social inertia, earlier noted in connection with habit, can only be checked by reflective criticism and appraisement of our current accustomed ways of action.[1]

In the case of the group, too complete a domination by custom is dangerous in that it sanctions and promotes the continuance of habits that have become useless or harmful.

[1] See chapter on "Cultural Continuity."

In the case of the individual, the determination of action by custom alone has its specific dangers and defects. Even though the individual happens to conform to useful customs, his conformity is purely mechanical. It involves no intelligent discrimination. Merely to conform places one at the disposition of the environment in which one chances to be. There is not necessary any intelligent analysis on the part of the agent, of the bearings and consequences of his actions. He takes on with fatal facility the color of his environment. To all men, however critical and reflective, a certain degree of conformity to custom is both necessary and useful. There must, in any social enterprise, be some common basis of action. Because taking the right-hand side of the road is a convention, it is none the less a useful one. But reflective acquiescence in a custom differs from merely mechanical conformity. It transforms a custom from a blind mechanism into a consciously chosen instrument for achieving good.

The trivial and the important in a morality based upon custom receive the same unconsidered support. "Tithing mint, anise, and cummin are quite likely to involve the neglect of weightier matters of the law." Physical, emotional, and moral energies that should be devoted to matters genuinely affecting human welfare are lavished upon the trivial and the incidental. We may come to be concerned more with manners than with morals; with ritual, than with right. Customary morality tends to emphasize, moreover, the letter rather than the spirit of the law. It implies complete and punctilious obedience, meticulous conformity. It emphasizes form rather than content. Since conformity is the only criterion, the appearance of conformity is all that is required. The individual may fear to dissent openly rather than actually. This is seen frequently in the ritualistic performance or fulfillment of a duty in all its external details, rather than the actual and positive performance of its content. It is just such Pharisaism that is protested against in the Sermon on the Mount:

> And when thou prayest, thou shalt not be as the hypocrites are; for they love to pray standing in the synagogues and in the corners of the streets, that they may be seen of men. Verily I say unto you, They have their reward. . . .
>
> But when ye pray, use not vain repetitions as the heathen do; for they think that they shall be heard for their much speaking.

Formalism in morality has periodically roused protest from the Prophets down, and formalism is the result of an unconsidered mechanical acquiescence in custom, or deliberate insistence on traditional details when the spirit and motive are forgotten.

Custom and progress. Emphasis upon customs as already established tends to promote fixity and repetition, and to discourage change regardless of the benefits to be derived from specific changes. Custom is supported by the group merely because it is custom; and the ineffective modes of life are maintained along with those which are more useful. Progress comes about through individual variation, and conformity and individual variation are frequently in diametrical collision. It is only when, in Bagehot's phrase, "the cake of custom" is broken, that changes making for good have a possibility of introduction and support. Where the only moral sanctions are the sanctions of custom, change of whatever sort is at a discount. For change implies deviation from the ways of life sanctioned by the group, and deviation is itself, in a custom-bound morality, regarded with suspicion.

It is clear that complete conformity is impossible save in a society of automata. There will be some individuals who will not be able to curb their desires to fit the inhibitions fixed by the group; there will be some who will deliberately stand out against the group commands and prohibitions, and assert their own imperious impulses against their fellows. Where such men are powerful or persuasive they may indeed bring about a transvaluation of all values; they may create a new morality. There are geniuses of the moral as well

as the intellectual life, whose sudden insight becomes a standard for succeeding generations.

There may, again, be more infringement of the moral code than is overtly noticeable. Frequently, as in a Puritanical régime, there may be, along with fanatic public professions and practice of virtue, private violation of the conventional moral codes. Our civilization is unpleasantly decorated with countless examples of this discrepancy between professed and practiced codes. The desire for praise and the fear of blame and its consequences, the desire, as we say, for the "good-will" and "respect of others," will lead to all the public manifestations of virtue, "with a private vice or two to appease the wayward flesh." The utterance of conventional moral formulas by men in public, and the infringement of those high doctrines in private, needs unfortunately not to be illustrated. Molière drew Tartuffe from real life.

Origin and nature of reflective morality. If the customs current were adequate to adjust men to their environment, reflection upon them might never arise. Reflection does arise precisely because customs are not, or do not remain, adequate. An individual is brought up to believe that certain actions are good, and that their performance promotes human happiness. He discovers, by an alert and unclouded insight, that in specific cases the virtues highly regarded by his group do not bring the felicitous results which they are commonly and proverbially held to produce. He observes, let us say, that meekness, humility, honesty are not modes of adaptation that bring happy results. He observes, as Job observed, that the wicked prosper; he notes that those who follow the path called righteous bring unhappiness to themselves and to others.

Or the individual's first reflection upon moral standards may arise in his discovery that moral standards are not absolute, that what is virtue in the Occident is vice in the Orient, and *vice versa*. He discovers that those actions which he regards as virtuous are so regarded by him simply because

he has been trained to their acceptance. Given another environment, his moral revulsions and approvals might be diametrically reversed. He makes the discovery that Protagoras made two thousand years ago: "Man is the measure of all things"; standards of good and evil depend on the accidents of time, space, and circumstance. In such a discovery an individual may well query, What *is* the good? Not what passes for good, but what is the essence of goodness? What is justice? Not what is accredited justice in the courts of law, or in the market-place, or in the easy generalizations of common opinion. But what constitutes *justice* essentially? What is the *standard* by which actions may be rated just and unjust?

Where individuals are habituated to one single tradition or set of customs, such questions may not arise. But where one, through personal experience or acquaintance with history and literature, discovers the multiplicity of standards which have been current with regard to the just and the good in human conduct, the search for some reasonable standard arises. The great historical instance of the discovery of the relativity and irrationality of customary morality and the emergence of reflective standards of moral value is the Athenian period of Greek philosophy. The Sophists pointed out with merciless perspicuity the welter, the confusion, the essential irrationality of current social and religious traditions and beliefs. They went no further in moral analysis than destructive criticism. They pointed out the want of authenticity or reason in the traditional morality by which men lived. Socrates went a step further. If current customs are not authoritative, he said, let us find those that have and *ought* to have enduring authority over men. If the traditional standards are proved to be futile and inefficacious, let us find the unfaltering standards authenticated by reason. Let us substitute relevant and adequate codes and creeds for those which have by reason been shown to be unreasonable. Beneath the multiplicity of contradictory and often vicious

customs, reason must be able to discover ways of life, which, if followed, will lead men to eventual happiness.

There are thus two stages in the process of reflection upon morals. In the first stage reflection does no more than to point out the essential discrepancies and absurdities of the current moral codes. Reflection upon morals begins by being critical and querying. It starts when an individual, a little more thoughtful and perspicacious than his fellows, notes the discrepancies between the customs of different men, and notes also the discrepancies between the threatened results of the violation of traditional codes and the actual results. He may then come to the cynic's conclusion that morality is a myth and a delusion, and, in the words of the Sophist in Plato's *Republic*, "justice is merely the right of the stronger." Men in whom reflection or social sympathy extends not very far may, as they frequently do, stop at this point. These are the worldly wise; they are interested not in goodness, truth, and justice, but in those effective representations of those things publicly accounted good, true, and just which will win them public approval and increase their own wealth or power and position. Plato, in the *Republic*, pictures the type with magnificent irony:

> All those mercenary adventurers who, as we know, are called sophist by the multitude, and regarded as rivals, really teach nothing but the opinions of the majority to which expression is given when large masses are collected, and dignify them with the title of wisdom. As well might a person investigate the caprices and desires of some huge and powerful monster in his keeping, studying how it is to be approached, and how handled, — at what times and under what circumstances it becomes most dangerous, or most gentle — on what occasions it is in the habit of uttering its various cries, and further, what sounds uttered by another person soothe or exasperate it, — and when he has mastered all these particulars, by long-continued intercourse, as well might he call his results wisdom, systematize them into an art, and open a school, though in reality he is wholly ignorant which of these humours and desires is fair, and which foul, which good and which evil, which just and which unjust; and therefore is content to affix all these names to the fancies of the huge

animal, calling what it likes good, and what it dislikes evil, without being able to render any other account of them, — nay, giving the titles of "just" and "fair" to things done under compulsion, because he has not discerned himself, and therefore cannot point out to others, that wide distinction which really holds between the nature of the compulsory and the good.[1]

Throughout human history, there have been periods of individualism, of self-assertion against the traditional morality, which have been marked by loss of moral restraints, by a breakdown of the old standards without a substitution of new and sounder ones. There has been, in the beginning of almost every advance toward a new stage of moral valuation, the accompaniment of liberty by license.

Reflection upon morals is not likely to produce immediately good results. The established morality is at least established. In so far as it is controlling in men's actions, it keeps those actions ordered and regular. The traditional code by which a man's life is governed may be a poor code, but it is more satisfactory than no code at all. On discovering the inadequacy of the morality by which he has lived, a man may reject morality altogether. From that time forth he may have no other standard than his own selfish desires. When a whole society, as at the time of the Renaissance, throws its traditional morality to the winds, it may make havoc of its freedom. In place of a bad moral order it may cease to have any moral order at all.

The discovery that the codes by which we have lived are misleading and delusive may lead us to have nothing whatsoever to do with morals. The individual may decide simply to employ his superior insight in the exploitation of other people. It is something of this point of view that is expressed in the rampant individualism of Nietzsche and Max Stirner. The customary morality is meant for slaves; the Superman must stride above the signs and shibboleths by which men are led, and create himself a morality more adequate to his own superb and insolent welfare.

[1] Plato: *Republic* (Golden Treasury edition), pp. 209–10.

For the reconstruction of a morality more adequate than the prevailing codes, more is demanded than merely a reflective criticism of prevailing standards. Where reflection goes no further than this, the net result is merely cynicism and libertinism. For moral progress there is needed "a person who is individual in choice, in feeling, in responsibility, and at the same time social in what he regards as good, in his sympathies and in his purposes."

Reflective reconstruction of moral standards. The second stage of reflection upon morals consists in the reconstruction of moral standards, in a deliberate discovery of codes by which men can live together happily. It attempts to establish standards of action which are enforced and recommended not because they have been current and are currently approved, but because they give promise, upon critical examination, of contributing to human happiness. It must be recalled here that reflective morality is not a substitute for action based upon instinct or custom. It merely modifies these types of action in the light of the desirable consequences which would result from such modification.

The establishment of reflective standards is limited by two general conditions. The first, previously mentioned, is that human beings come into the world with certain fixed tendencies to act. These original impulses may be obscured, but cannot be abolished. Secondly, reflection upon morals always must occur in a given social situation, that is, in a situation where certain habits of mind, emotion and action, are already in operation. Moral standards are not fresh constructions; they are *reconstructions*. We may want to *change* current customs and traditions; but that is simply another way of iterating the fact that they *are there to be changed*. The moral reformer who would improve society must take into account the fact that there exist among the adult members of a generation, powerful habits, which may be improved or amended, but which cannot be ignored. Any attempt to improve men's ways of action starts within

processes of action already going on. It is not as if we could hold up the processes of human life, and say, "Let us begin afresh." The generation whose habits are to be changed consists of living men, who are acting on the basis of customs which have become intimately and powerfully controlling in their lives. These customs, though they may not be altogether satisfactory, are yet great social economies. They give men certain determinate and efficacious modes of action. Reflection must start with them and from them. Unless men, furthermore, did act according to custom, they would have to reflect in detail about every step of their conduct. The aim of reflection is simply to transform existing customs into more effective methods for achieving the good.

Reflection, indeed, must move within certain limits; it must take certain things for granted. We have already seen that reflection arises in a crisis of greater or lesser degree; it settles ambiguities, resolves the obscure and doubtful phases of situations. It is designed to secure adjustments where instinct and habit are inadequate to adapt the individual to his environment. But unless there were certain fixed, determined points to start with, certain limits within which reflection could operate, and which it could use as points of reference or departure, all would be chaos, and reflection would be impossible. It is precisely because we do take certain things as settled, because, as the phrase runs, "they go without saying," that we can think to any purpose whatsoever. Useful customs once established provide precisely these fixed points. If arbitration of labor disputes has become a fixed social habit, for example, attention can be turned to ways and means. If education has become a generally approved social habit, we can spend our time on instruments and methods. Every useful custom firmly established gives a basis of operations. That much is settled; that much does not demand our alert attention and inquiry. A society without any fixed habits would be sheer anarchy. The aim of intelligent consideration of morals is not to abolish customs, but to bring about their

modification so that they will be the most effective adjustment of the individual and the group to their environment.

Indeed, in advanced societies, reflection may itself become a custom, and the most highly valued of all. For where alert and conscious criticism of existing folkways is habitual among all the members of a society, that society is saved from subjection through inertia to disserviceable habits. It acts as a continual check and control; it prevents social and moral stagnation. The habit of reflection upon conduct, if it could be made generally current, would insure social progress. For customs would be regarded merely as tools, as instruments to be modified and adapted to new circumstances, as provisional modes of attaining the good. Fixity and rigidity in social life would give place to flexibility and wise continual adaptation.

The values of reflective morality. Some of these have already been noted. We may briefly summarize the foregoing discussion, and call attention to some additional values of a morality based upon reason, as contrasted with a morality of mere mechanical conformity to custom. It has already been pointed out that intellectual preferences and valuations are rooted in primary impulses; that is, our desires are anterior to reflection. What we intellectually value and prefer has its roots in primary impulses. Reason can discover how man may attain the good; but what *is* good is determined by the desires with which man is, willy-nilly, endowed. Our preferences are, within limits, fixed for us. As Santayana writes:

> Reason was born, as it has since discovered, into a world already wonderfully organized, in which it found its precursor in what is called life, its seat in an animal body of unusual plasticity, and its function in rendering that body's volatile instincts and sensations harmonious with one another and with the outer world on which they depend.[1]

Our chief aim in reflective behavior is to discover ways and means by which a harmony may be achieved, a harmony of

[1] Santayana: *Life of Reason*, vol. I, p. 40.

those very instincts which, left to themselves, would be in perpetual collision, frustrating and checking each other.

Reflection not only seeks to find a way of life in which no natural impulse shall be frustrated, but it is through reflection that desires are broadened, and that new desires arise. Out of reflection upon social relations, which is in the first instance prompted by man's innate gregariousness, arise the conception of ideal friendship and the thirst for and movement toward ideal society. Out of reflection upon the animal passion of sex may rise Dante's beatific vision of Beatrice. Conduct, consciously controlled, finds not only ways by which animal desires may be fulfilled without catastrophe; it transmutes animal desires into ideal values.

Reflection transforms customs into principles. In reflective behavior, as contrasted with that which is controlled by instinct and custom, there are established standards of action to which the individual consciously conforms. That is, instead of merely conforming to custom, an individual comes to act upon principles, consciously avowed and maintained. A man who sets up a standard of action in his professional or business relations is not conforming to an arbitrary code; he is living according to a way of life which he has deliberately and consciously chosen. When a man acts upon principles because he has consciously adopted them in view of the consequences which he believes to be associated with them, he will not make his standard an idol. Reflection establishes standards, but it is not mastered by them. It is persistently critical. Standards are tools, instruments toward the achievement of the good. They are merely general rules, derived from experience and retained so long as they bear desirable fruits in experience. Moral laws are not regarded as arbitrary and eternal, but as good only in so far as they produce good. A virtue is a virtue because it is conducive to human well-being. Standards are not absolute, but relative — relative to their fruits in practice.

Reflective action genuinely moral. Action is most gen-

uinely moral when it is reflective. It is only then that the individual is a conscious and controlling agent. It is only then that he knows what he is doing. When a machine performs actions that happen to have useful results, we do not speak of the action as moral or virtuous. And action in conformity with custom is purely mechanical and arbitrary. An individual who is merely conforming to the customary is no more moral than an automaton. Given a certain situation, he makes a certain response. It makes no difference that the act happens to have fruitful consequences. It is not a matter of individual choice, of conscious volition. Aristotle long ago stated the indispensable conditions of moral actions:

> It is necessary that the agent at the time of performing them should satisfy certain conditions, *i.e.* in the first place that he should know what he is doing, secondly that he should deliberately choose to do it and to do it for its own sake, and thirdly that he should do it as an instance of a fixed and immutable moral state.[1]

Only when the individual is aware of the consequences of his action, and deliberately chooses those consequences, is there any individuality, any exhibition of choice — in other words, any moral value in the act. When an act is prompted by mere habit and custom, we have an evidence of an individual's environment rather than of his character. Creatures thus moved by capricious and arbitrary impulse are hardly persons, and certainly not personalities. They are played upon by every whimsicality of circumstance; their own character makes no difference at all in the world in which they live. To act reflectively is to be the controlling rather than the controlled element in a situation. Action guided by intelligence is freed from the enslavement of passion, prejudice, and routine. It becomes genuinely free. The individual, emancipated from emotion, sense, and circumstance, from the accidental environment in which he happens to be born, is in command of his conduct. "Though shakes the magnet, steady is

[1] Aristotle: *Ethics*, book II, p. 42 (Weldon translation).

the pole." Morally, at least, he is "the master of his fate, the captain of his soul."

Reflection sets up ideal standards. Reflection constantly sets up ideal standards by which current codes of conduct are judged and corrected. It is clear that ideals of life, even when sincerely entertained, are not always possible of immediate fulfillment. Theory tends continually to outrun practice, since human reflection tends to set up goals in advance of its achievement. For many individuals, anxious to attain immediate self-enhancement, the current codes are not criticized at all, but are taken for granted, as inevitable and irrefragable bases of operation.

Many men, perhaps after a first flush of altruistic rebellion in adolescence, settle down with more or less complacency to the current moral codes. They do in Rome as the Romans do. They may have an intellectual awareness of the crassness, the stupidity, the essential injustice and inadequacy of the codes by which men in contemporary society live, but they may also, out of selfish preoccupation with their own interests, let things go at that. If the established ways are not as they ought to be, at least they are as they are. And since the current system is the one by which a man must live, assent is the better part of wisdom. There are comparatively few who persist in a criticism of prevailing standards, or who are troubled very much beyond their early twenties by a tormenting conviction that things are not done as they ought to be done. It is from the few who realize intellectually the inadequacies of prevailing customs, and are emotionally disturbed by them, that moral criticism arises. And it is only by such criticism that moral progress is made possible. "The duty of some exercise of discriminating intelligence as to existing customs, for the sake of improvement and progress, is thus a mark of reflective morality — of the régime of conscience as over against custom." [1]

Reflection is thus the process by which progress is made

[1] Dewey and Tufts: *Ethics*, pp. 181–82.

possible, although, as we shall presently see, it is not thereby insured. The function of intelligence is precisely to indicate anticipated goods, "to imagine a future which is the projection of the desirable in the present." Even the best ordered life or society reveals some maladjustment, some remove, near or far, from perfection. It is the business of reflection and imagination to note the discrepancy between what is, and what ought to be, and assiduously to foster the vision of the latter, so that in the light of that imagined good, men's ways of life may be amended.

Nor does the setting-up of ideal standards mean the construction of fruitless Utopias. Reflection upon the present ways of life and the prospect of their improvement does not mean a mere wistful yearning after better things. It means careful inquiry into those elements of established ways which may be incorporated into the construction of the ideal. It means the resolute application of intelligence to an analysis of present maladjustments in the interests of preserving out of inherited and current ways those factors which point towards the goal desired. It means to be eager for perfection, and sensitive to current imperfections. Moral progress demands a vision of the desirable future, and a persistent and discriminating reflection upon the means of its attainment out of the materials of the present.

The defects of reflective morality. Reflection, as already pointed out, tends to stop with merely destructive criticism. Provoked by maladjustment and imperfection, it frequently goes no further than to note these, with cynicism or despair. Criticism of established customs and ways of life frequently rests with the exhibition of absurdities in men's ways, finding refuge in laughter or rebellion. There is no one so cynical as the man who has been recently wakened out of dogmatic and innocent faith in the traditions to which he has been reared.

The child receives from the herd the doctrines, let us say, that truthfulness is the most valuable of all the virtues, that honesty is the best policy, that to the religious man death has no terrors, and

that there is in store a future life of perfect happiness and delight. And yet experience tells him with persistence that truthfulness as often as not brings him punishment, that his dishonest playfellow has as good if not a better time than he, that the religious man shrinks from death with as great a terror as the unbeliever, is as broken-hearted by bereavement, and as determined to continue his hold upon this imperfect life rather than trust himself to what he declares to be the certainty of future bliss. . . . Who of us is there who cannot remember the vague feeling of dissatisfaction, the obscure and elusive sense of something being wrong, which is left by these and similar conflicts ?[1]

A little reflection is, in morals, a dangerous thing. It discovers difficulties, and does not solve them. It finds that human life is darkly strewn with hypocrisies, with shams, with makeshifts and compromises. And having made this discovery, it sighs or satirizes or forgets. It is notorious with what frequency men "go to pieces" when they are loosed from the moorings of their childhood moralities, before they have had a chance to acquire new and more reasonable constraints. Plato, in protesting that young men should not study philosophy too early, has well described the dangers of shallow analysis.[2]

The inadequacy of theory in moral life. Reflection upon morals, even when it goes beyond the stage of criticism and proceeds to the reconstruction of habits and customs upon a more reasonable basis, is yet inadequate. However logically convincing a code of morals may be, it is not efficacious simply as logic. In Aristotle's still relevant words:

It may fairly be said then that a just man becomes just by doing

[1] Trotter: *Instincts of the Herd in Peace and War*, p. 49.

[2] "And will it not be one great precaution to forbid their meddling with it [philosophy] while young? For I suppose you have noticed, that whenever boys taste dialectic for the first time, they pervert it into an amusement, and always employ it for purposes of contradiction, and imitate in their own persons the artifices of those who study refutation, — delighting, like puppies, in pulling and tearing to pieces with logic any one who comes near them. . . . Hence, when they have experienced many triumphs and many defeats, they fall, quickly and vehemently, into an utter disbelief of their former sentiments: and thereby both they and the whole cause of philosophy have been prejudiced in the eyes of the world." (Plato: *Republic*, Golden Treasury edition, p. 267.)

what is just and a temperate man becomes temperate by doing what is temperate, and if a man did not so act, he would not have so much as a chance of becoming good. But most people, instead of doing such actions, take refuge in theorizing; they imagine that they are philosophers and that philosophy will make them virtuous; in fact they behave like people who listen attentively to their doctors, but never do anything that their doctors tell them. But it is as improbable that a healthy state of the soul will be produced by this kind of philosophizing as that a healthy state of the body will be produced by this kind of medical treatment.[1]

Moral standards, in order to be effective, must have emotional support and be constantly applied. Men must be in love with the good, if good is to be their habitual practice. And only when the good is an habitual practice, can men be said to be living a moral life instead of merely subscribing verbally to a set of moral ideals. Justice, honesty, charity, mercy, benevolence, these are names for types of behavior, and are real in so far as they do describe men's actions. As Aristotle says, in another connection: "A person must be utterly senseless if he does not know that moral states are formed by the exercise of the powers in one way or another." The virtues are not static or frozen; they are names we give to varieties of action, and are exhibited, as they exist, *only* in action.[2]

[1] Aristotle: *Ethics*, book II, chap. III, pp. 42–43 (Weldon translation).

[2] "But the virtues we acquire by first exercising them, as is the case with all the arts, for it is by doing what we ought to do when we have learned the arts, that we learn the arts themselves; we become, *e.g.* builders by building, and harpists by playing the harp. Similarly it is by doing just acts that we become just, by doing temperate acts that we become temperate, by doing courageous acts that we become courageous. . . . Again the causes and means by which any virtue is produced, and by which it is destroyed, are the same; and it is equally so with any art; for it is by playing the harp that both good and bad harpists are produced, and the case of builders and all other artisans is similar, as it is by building well that they will be good builders, and by building badly that they will be bad builders. . . . It is by acting in such transactions as take place between man and man that we become either just or unjust. It is by acting in the face of danger and habituating ourselves to fear or courage that we become either cowardly or courageous. It is much the same with our desires and angry passions. Some people become temperate and gentle, others become licentious and passionate, according as they conduct themselves in one way or another way in particular circumstances." (Aristotle: *Ethics*, pp. 35–36, Weldon translation.)

The mere preaching of virtue will thus not produce its practice. Those standards which reflection discovers, however useful in the guidance of life, are not sufficient to improve human conduct. They must, as noted above, be emotionally sanctioned to become habitual, and, on the other hand, only if they are early acquired habits, will the emotions associated with them be pleasant rather than painful. "Accordingly the difference between one training of habits and another from early days is not a light matter, but is serious or rather all-important."[1] Ideals of life, when they remain mere closet-ideals, are interesting academic specimens, but are hardly effective in the helpful amendment of the lives of mankind. "Whoever contemplates the world in the light of an ideal," writes Bertrand Russell, "whether what he seeks be intellect or art, or love, or simple happiness, or all together, must feel a great sorrow in the evils which men allow needlessly to continue and — if he is a man of force and vital energy — an urgent desire to lead men to the realization of the good which inspires his creative vision." Great thinkers upon morals have not been content to work out interesting systems which were logically conclusive, abstract methods of attaining happiness. They have worked out their ethical systems as genuinely preferred ways of life, they have offered them as solutions of the difficulties men experience in controlling their own passions and in adapting their desires to the conditions which limit their fulfillment.

"Our present study," writes Aristotle, "is not, like other studies, purely speculative in its intention; for the object of our inquiry is not to know the nature of virtue, but to become ourselves virtuous, as that is the sole benefit which it conveys."[2] Reflection upon morals can map out the road; it cannot make people travel it. For that, an early habituation to the good is necessary.

But it should be noted further that the greatest ethical reformers have not been those who have convinced men

[1] Aristotle: *loc. cit.*, p. 36.

[2] *Ibid.*, p. 36.

through the impeccability of their logic. They have been rather the supreme seers, the Hebrew prophets, Christ, Saint Francis, who have won followers not so much by the conclusiveness of their demonstration as through the persuasive fervor and splendor of their vision.

The danger of intellectualism in morals. There has been throughout the history of ethical theory a tendency to oversimplify life by cramping it into the categories fixed by reason. Reflection tends to set up certain standards which the infinite variety of human experience tends to outrun. In the mere fact of setting up generalizations, reflection is arbitrary. Any generalization, by virtue of the very fact that it does apply to a wide variety of situations, must forego concern with the peculiar colors and qualities inhering in any specific experience. Various ethical writers have set up general rules, which they have attempted to apply to life with indiscriminate ruthlessness. They have tried to shear down the endless rich variety of human situations to fit the categories which they assume to start with. Unsophisticated men have complained with justice against the recurrent attempts of moralists to set up absolute laws, standards, virtues, which were to be applied regardless of the specific circumstances of specific situations. It was such formalism that Aristotle protested against throughout his *Ethics*.

> There is the same sort of uncertainty with regard to good things, as it often happens that injuries result from them; thus there have been cases in which people were ruined by wealth, or again by courage. As our subjects [moral inquiries] then and our premises are of this nature, we must be content to indicate the truth roughly, and in outline.[1]

He points out repeatedly that situations are specific, that laws or generalization can only be tentatively made.

> Questions of practice and expediency no more admit of invariable rules than questions of health. But if this is true of general reasoning upon Ethics, still more true is it that scientific exactitude is impossi-

[1] Aristotle: *loc. cit.*, pp. 3–4.

ble in reasoning upon particular ethical cases. They do not fall under any art or any law, but the agents themselves are always bound to pay regard to the circumstances of the moment, as much as in medicine or navigation.[1]

Instead of framing absolute general rules, Aristotle points out those specific conditions which must be taken into account in any act that can, without quibbling, be called good or virtuous.

It is possible to go too far, or not to go far enough, in respect of fear, courage, desire, anger, pity, and pleasure and pain generally, and the excess and the deficiency are alike wrong; but to experience these emotions at the right time, and on the right occasions and towards the right persons, and for the right causes and in the right manner is the mean or the supreme good, which is characteristic of virtue.[2]

Reflection thus unduly simplifies the moral problem by setting up general standards which are not adequate to the multiple variety of specific situations which constitute human experience. But in reasoning upon the conduct of life, there has been displayed, furthermore, by ethical writers an inveterate tendency to identify the processes of life with the process of reason. One may cite as a classic instance of this point of view the ethical theory of Jeremy Bentham and the Utilitarians. According to the Utilitarians human beings judged acts in terms of their utility, as measured in the amount of pleasure and pain produced by an action. The individual figured out the pleasures and pains that would be the consequences of his action. We shall in the next section examine this point of view in more detail; we are referring to it here simply as an illustration of intellectualizing of morals. Few individuals go through anything remotely resembling the "hedonic calculus" laid down by Bentham.[3] The individual

[1] Aristotle: *loc. cit.*, p. 37. [2] *Ibid.*, p. 46.

[3] The hedonic calculus of Bentham was, briefly, the following: "Every proposed act is to be viewed with reference to its probable consequences, in (1) intensity of pleasures and pains, (2) their duration, (3) their certainty or uncertainty, (4) their nearness or remoteness, (5) their fecundity, *i.e.*, the tendency of a pleasure to be followed by others, or a pain by other pains;

is not a static being, mathematically considering the amount of pleasure and pain associated with the performance of specific actions. We are, in the vast majority of cases, prompted to specific responses, not by any mathematical considerations of pleasures and pains, but by the immediate urgency of instinctive and habitual desires. Reflection arises in the process of adjustment of competing impulses, in the effecting of a harmony between various desires that are much more primary and fundamental than the reflection that arises upon them. We may largely agree with McDougall when he writes:

> We may say, then, that directly or indirectly, the instincts are the prime movers of all human activity; by the conative or impulsive force of some instinct (or of some habit derived from an instinct) every train of thought, however cold and passionless it may seem, is borne along towards its end, and every bodily activity is initiated and sustained. The instinctive impulses determine the ends of all activities and supply the driving power by which all mental activities are sustained; and all the complex intellectual apparatus of the most highly developed mind is but a means towards these ends, is but the instrument by which these impulses seek their satisfactions, while pleasure and pain do but serve to guide them in their choice of the means.
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> Take away these instinctive dispositions with their powerful impulses, and the organism would become incapable of activity of any kind; it would lie inert and motionless, like a wonderful clockwork whose mainspring had been removed, or a steam-engine whose fires had been drawn.[1]

Reflection is last rather than first; it is provoked and sustained by instinctive desires, and is the means whereby they may be fulfilled.

(6) their purity, *i.e.*, the tendency of a pleasure to be followed by pains and *vice versa;* (7) their extent, that is, the number or range of persons whose happiness is affected — with reference to whose pleasures and pains each one of the first six items ought in strictness also to be calculated. Then sum up all the pleasures which stand to the credit side of the account; add the pains which are the debit items, or liabilities, on the other; then take their algebraic sum, and the balance of it on the side of pleasure will be the good tendency of the act upon the whole." (Dewey and Tufts: *Ethics*, pp. 275–76.)

[1] McDougall: *Social Psychology*, p. 44.

Types of moral theory. Reflection upon morals produces certain characteristic types of moral theory. These may be classified, although, because of the complexity of factors involved in any moral theory, cross-division is inevitable. But in the long history of human reflection upon a reasonable way of life, certain divisions stand out clearly. The first great contrast that may be mentioned is that existing between Absolutism and Relativism, the contrast, namely, between theories of morals that regard right and wrong as absolute and *a priori*, unconditioned by time, place, and circumstance; and theories of morals that judge the rightness and wrongness of acts in terms of their consequences, in the happiness or welfare of human beings, however that be conceived. These two points of view represent radically different temperaments and differ radically in their fruits. The contrast will stand out more clearly after a brief discussion of each.

Absolutism. Absolutistic moralities are distinguished by their maintenance of the fundamental moral idea of Duty, Duty consisting in an obligation to conform to the Right. Implied in this obligation of absolute conformity is the conception that the Right is unalterable, universally binding, and imperative. Good and evil are not discoverable in experience, but are standards to which human beings must in experience conform. The right is not simply the desirable — frequently it is, from the standpoint of impulses and emotion, the undesirable; but it is a universal, an *a priori* standard to which human beings must in experience conform. Morals are "eternal and immutable" principles, absolutely irrefutable and indefeasible in experience. We shall, in approaching the problem from the standpoint of moral knowledge, see that most absolutist moral philosophers have also supposed that these eternal principles of right action are intuitively perceived. What concerns us in this connection, however, is the nature of this absolutistic conception, and its bearings on the governance of human conduct.

According to the absolutist, the "goodness" of an act is

not at all affected by its immediate consequences. The value of a good or a moral act does not consist in its results. The moral value of an act consists in the "good-will" of the agent, and the "good-will" of the agent consists in his willing and conscious conformity to the absolute moral principle involved. "Nothing is fundamentally good but the good-will." That is, an act to be moral, must be the conscious conformity of a rational agent to the moral law, which he recognizes to be morally binding. To Kant, the classic exponent of this position, an act performed out of mere inclination, if not immoral, certainly was not moral. A moral act could only flow from reason, and reason would dictate to an individual conformity to the moral law, which was a law of reason. Conduct that is determined by mere circumstance is not moral conduct. Morality is above the domain of circumstance. And the moral agent is above the defeats and compromises imposed by time and place. He is a free agent, that is, morally free. He accepts no commands, except those of reason. A man, in following impulse or being dictated to by circumstance, is a mere animal or a machine. He is only a reasonable, that is, a moral being, when he conforms to the laws which are above time and place and circumstance, and above the whirls and eddies of personal inclination.

Concretely, one may take the absolutistic attitude toward a specific virtue: honesty. The morality of telling the truth consists in a conscious conformity to the moral standard of honesty in the face of all deflections of inclination and particular situations. It makes no iota of difference what the result of telling the truth in a particular instance may be. It makes no difference what urgent and plausible and practically decent reason one has for not telling the truth. The truth must be told, as justice must be done, though the heavens fall. We have a case, let us suppose, where telling bad news to a very sick man may kill him. That temporally disastrous consequence is, from an absolutistic point of view, a totally irrelevant consideration, as is also the pain we feel

in telling the truth under such conditions. But the single moral course is clear; there is no alternative; in absolutistic morals there are no extenuating circumstances. The truth must be told, whatever be the consequences. For to tell the truth is a universal moral law, and conformity to that law a universal moral obligation.

The defects of this position, if they are not obvious from its bare statement, will become clearer from the analysis of the relativist or teleological positions. But its specific virtues deserve attention. The Kantian or absolutistic position, by its emphasis on the indefeasible and unwavering character of moral action, suggests something that rouses admiration from common sense, unsophisticated by moral theory. We do not think highly of the man who is at the mercy of every chance appetite, or every casual incident. Morality must be constituted of more enduring stuff. We do not deeply admire the caliber of a man who yields to every pressing exigency, surrendering thereby every ideal, principle, or value, the attainment of which demands some postponement or some privation of the fulfillment of immediate desire. The man who compromises his political ideals in the attainment of his personal success, is a scornful figure morally. And we estimate more highly the character of an individual who can persist in the strenuous attainment of an ideal in the face of the counter-inclination of passing pleasures. In its emphasis on the autonomy and integrity of moral action, even its opponents credit the Kantian or absolutistic position with having hit upon a genuinely moral aspect of human action. It is, as we shall see, in the rigidity and formalism of its conception, in its fanatical allegiance to *a priori* standards, and its absolute sanctification of given ways of action, that the theory is questionable.

Relativistic or teleological morality. Contrasted with the theories of morals that maintain that right and wrong are absolute and eternal principles unaffected by time, place, and circumstance, are those moral philosophies which set out

explicitly to discover a way of life by which human happiness in this world of time and place and circumstance may be attained. To know what is the supreme good, and to discover what are the means of its attainment, are, as Aristotle long ago and justly observed, of great importance in the regulation of life. It is this knowledge and discovery that constitute, according to Aristotle, the business of ethics. Regarding this "supreme good," we may quote his own expressions:

> We speak of that which is sought after for its own sake, as more final than that which is sought after as a means to something else; we speak of that which is never desired as a means to something else as more final than the things which are desired both in themselves and as means to something else; and we speak of a thing as absolutely final, if it is always desired in itself and never as a means to something else.
>
> It seems that happiness preëminently answers to this description, as we always desire happiness for its own sake, and never as a means to something else, whereas we desire honour, pleasure, intellect, and every virtue, partly for their own sakes, . . . but partly also as being means to happiness, because we suppose they will prove the instruments of happiness. Happiness, on the other hand, nobody desires for the sake of these things, nor indeed as a means to anything else at all.[1]

Happiness may, as Aristotle observes, be differently conceived by different people. To some it may mean a life of sensual enjoyment; to some men a life of money-making. But it is the attainment of *complete* satisfaction and self-realization by the individual that ethical theories should promote; for such self-realization constitutes happiness. It is sufficient here to point out that all so-called "teleological" or "relativistic" moralities, insist that the morality of an action is not determinable *a priori*, or absolutely. They are *relativistic* in the sense that they insist on taking into account the specific circumstances of action in the determination of its moral value. They are *teleological* in that they insist on measuring the moral value of an action in terms of its consequences

[1] Aristotle: *loc. cit.*, pp. 13–14.

in human well-being or happiness, however those be conceived. To revert to the illustration used in connection with the discussion of Absolutism, to lie in order to save a life would, on this basis, be construed as good rather than evil.

Utilitarianism. One of the classic statements of relativistic and teleological morality is Utilitarianism. According to the Utilitarians the criterion of the worth of a deed was to be found in an estimation of the relative pleasures and pains produced by it. The view is thus stated by John Stuart Mill:

> The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain and the privation of pleasure. To give a clear view of the moral standard set up by the theory, much more requires to be said; in particular, what things it includes in the ideas of pain and pleasure; and to what extent this is left an open question. But these supplementary explanations do not affect the theory of life on which this theory of morality is grounded — namely, that pleasure and freedom from pain are the only things desirable as ends; and that all desirable things (which are as numerous in the utilitarian as in any other scheme) are desirable either for the pleasure inherent in themselves, or as means to the promotion of pleasure and the prevention of pain.[1]

Simply stated, Utilitarianism says: "Add together all the pleasures promised by a contemplated course of action, then the pains, and note the difference; the nature of the difference will determine whether the course is right or wrong." Pleasures and pains are thus conceived as being open to quantitative determination. Action is determined by mathematical calculation in advance of the pleasure and pain produced by any action. Bentham's name is particularly associated with the dictum, "the greatest happiness for the greatest number." But two implications of this doctrine must be taken into account, at least as Bentham interpreted it. The greatest happiness meant the maximum amount of pleasure. And

[1] Mill: *Utilitarianism* (London, 1907), pp. 9–10.

each individual could desire the greatest happiness, only in so far as it contributed to his own happiness or pleasure. And, for Bentham, as for all strict Utilitarians, there was no qualitative distinction in the amounts of pleasure. "The quantity being the same," said Bentham, "pushpin is as good as poetry."

Utilitarianism is here considered as an instance of a type of ethical theory that set human happiness as the end, and made its judgments of actions depend on their consequences in human welfare. It must be pointed out, however, that its conception of happiness was dependent on a psychology now almost unanimously recognized as false: Bentham's assumption that the *reason* human beings performed certain actions was *because* they desired certain pleasures, completely reverses the actual situation. It puts, as it were, the cart before the horse. Pleasure is psychologically the accompaniment, what psychologists call the "feeling tone" of the satisfaction of any instinctive or habitual impulse. Human beings have certain native or habitual tendencies to action, and pleasure attends the performance of these. It is not because we want the pleasure of eating, that we decide to eat; we want to eat, and eating is therefore pleasant.

> If the good Samaritan cared about the present feelings or the future welfare of the man fallen among thieves, it would no doubt give him some pleasure to satisfy that desire for his welfare; if he had desired his good as little as the priest and the Levite, there would have been nothing to suggest the strange idea that to relieve him, to bind up his nasty wounds, and to spend money upon him, would be a source of more pleasure to himself than to pass by on the other side and spend the money upon himself. In the case of the great majority of our pleasures, it will probably be found that the desire is the condition of the pleasure, not the pleasure of the desire.[1]

As has been previously pointed out in this and other chapters, action does not start with reflection upon pleasures, or, for that matter, upon anything else. Action is fundamentally

[1] Rashdall: *Ethics*, p. 18.

initiated by instinctive promptings, or the promptings of habit. Satisfaction or pleasure attends the fulfillment of any inborn or acquired impulse, and dissatisfaction or pain its obstruction or frustration. Apart from the satisfactions experienced in the fulfillment in action of such impulses, pleasure does not exist. Actions, situations, persons, or ideas can be pleasant to us, but "pleasure" as a separate objective entity cannot be said to exist at all. The Utilitarians, again, made the intellectualist error of supposing that men dispassionately and mathematically weighed the consequences of their actions, whereas their relative impulsions to action are determined by the instincts they inherit and the habits they have already acquired.

Despite its false psychology, Utilitarianism does stand out as one of the great classic attempts to build an ethical theory squarely designed to promote human happiness. An execution of the same worthy intention, more acceptable to those trained in the modern psychology of instinct, is that moral conception variously known as Behaviorism, or Energism, a point of view maintained by thinkers from Aristotle to Professor Dewey in our own day. All behavioristic theories take the position that in order to find out what is good for man, we must begin by finding out what man is. In order to discover what will give man satisfaction, we must discover what his natural impulses and capacities are. In the utilization and fulfillment of these will man find his most complete realization and happiness. The standard of goodness, therefore, is measured in terms of the extent to which action promotes a complete and harmonious utilization of natural impulses and natural capacities. Ethics, from such a viewpoint, cannot set up arbitrary standards, but must form its standards by inquiries into the fundamental and natural needs and desires of men. Instead of laying down eternal principles to which human beings must be made to conform, it must derive its principles from observations of human experience, and test them there. The good is what does good; the bad what does

harm. And what is good for men, and bad for men, depends not on rigid *a priori* intellectual standards, but on the original nature which is each man's inheritance.

To base ethics upon an analysis of the conditions of human nature, as scientific inquiry reveals it, carries with it two implications. It means that nothing that is shown to be a part of man's inevitable original equipment can with justice to man's welfare be ruled out. Every instinct taken by itself is as good as any other. It is only when one instinct competes with another, so that excessive indulgence of one, as, for example, that of sex or pugnacity, interferes with all a man's other instincts or interests (or with those of other men), that an instinct becomes evil. It means, secondly, that since individuals differ, and since situations are infinitely various and individual, no arbitrary and fixed laws can be laid down as fundamental eternal principles.

Moral knowledge. The contrast between the two types of morality that have been historically current may be approached from the standpoint of moral knowledge. That is, moral theories may be classified on the basis of their answer to the question: How do moral judgments arise? The chief contrast to be drawn is that between Intuitionalism on the one hand, and Empiricism on the other. Intuitionalism holds briefly that the moral quality of an act is intuitively perceived, and is recognized apart from experience of its consequences. The empirical theory holds that moral judgments come to be attached to acts as a result of experience, and particularly experiences of the approval and disapproval of other people. The contrast will again become clearer by a discussion of each theory separately.

Intuitionalism. Intuitionalism takes two chief forms. The first, Perceptual Intuitionalism, as Sidgwick calls it, holds that the rightness of each particular act is immediately known. The second, called by the same author Dogmatic Intuitionalism, holds that the general laws of common-sense morality are immediately perceived. The popular view of "con-

science," well illustrates the first-mentioned position of the Intuitionalist.

> We commonly think of the dictates of conscience as relating to particular actions, and when a man is bidden in a particular case to "trust to his conscience," it commonly seems to be meant that he should exercise a faculty of judging morally this particular case without reference to general rules, and even in opposition to conclusions obtained by systematic deduction from such rules.[1]

Conscience, this organ of immediate moral perception, is frequently taken to be divinely given at birth. There is no one so certain or immovable as the man whose actions are dictated by his "conscience." He does not have to think about his actions; he knows immediately what is right and what is wrong. The intuitionalist does not go into the natural history of scruples for or against the performance of certain actions. He takes these immediate aversions or promptings to act as the revelations of immediate and unquestionable knowledge, frequently presumed to be divinely implanted. Most Intuitionalists hold not that we experience an immediate intuition of the rightness or wrongness of action in every single situation, but that the common rules of morality, such common rules as good faith and veracity, are immediately recognized and assented to as moral. They insist that these are not determined by experience or by reflection, since stealing, lying, and murder are *known* to be wrong by every one, though most men could not tell why.

Intuitionalism carried out to logical extremes is represented by such men as Tolstoy, and, in general, those who genuinely and persistently act according to the dictates of their conscience, "who hold, and so far as they can, act upon the principle that we must never resist force by force, never arrest a thief, must literally give to him that asketh, up to one's last penny, and so on."

Empiricism. To explain the grounds of the Empirical position is to exhibit the arguments in refutation of Intui-

[1] Sidgwick: *Methods of Ethics* (4th edition), p. 99.

tionalism. The most obvious and frequent line of attack that empirical moralists make upon Intuitionalism is to examine and compare the various "intuitions" of right conduct which have been held by men in different ages and places.

The traditional method of combating intuitionalism from the time of John Locke to that of Herbert Spencer has been to present the reader with a list of cruel and abominable savage customs, ridiculous superstitions, acts of religious fanaticism and intolerance, which have all alike seemed self-evidently good and right to the peoples or individuals who have practised them. There is hardly a vice or a crime (according to our own moral standard) which has not at some time or other in some circumstances been looked upon as a moral and religious duty. Stealing was accounted virtuous for the young Spartan, and among the Indian caste of Thugs. In the ancient world, piracy, that is, robbery and murder, was a respectable profession. To the mediæval Christian, religious persecution was the highest of duties, and so on.[1]

The Empiricist asks: If all these intuitions are absolute; if men at various times and at various places, indeed, if, as is the case, men of different social classes and situations at the present time, differ so profoundly in their "intuitions" of the just, the noble, and the base, which of the conflicting intuitions, all equally absolute, is *the* absolute? The Intuitionalist continually appeals to the universal intuition and assent of Mankind. But there is scarcely a single moral law for which universal assent in even a single generation can be found. One has but to survey the heterogeneous collection of customs and prohibitions collected in such a work as Frazer's *Golden Bough*, to see how little unanimity there is in the moral intuitions of mankind.

The Empiricist finds the origin of these divergent moral convictions in the divergent environments to which individuals in different places, times, and social situations are exposed. The intensity and apparent irrefutability of these convictions, which the Intuitionalist ascribes to their innate-

[1] Rashdall: *loc. cit.*, p. 59.

ness, the Empiricist ascribes to their early acquisition, and the deep emotional hold which early acquired habits have over the individual. Those moral beliefs which we hold with the utmost conviction and intensity are, instead of being thereby guaranteed as most reasonable and genuinely moral, thereby rendered, says the Empiricist, the more suspect. They are evidences of the effectiveness of our early education, or of our high degree of sensitiveness to our fellows. Conscience is thus reduced to habitual emotional reactions produced by the contact of a given individual temperament with a given environment.

Thus acts come by the individual to be recognized as right or wrong, according to the tradition to which he has been educated and the contacts with other people to which he is continually exposed. The Empiricist does not deny that there are intuitions, or apparent intuitions. He denies their ultimacy, their unquestionable validity.

> When . . . we find ourselves entertaining an opinion about the basis of which there is a quality of feeling which tells us that to inquire into it would be absurd, obviously unnecessary, unprofitable, undesirable, bad form, or wicked, we may know that that opinion is a non-rational one, and probably, therefore, founded upon inadequate evidence.[1]

These so powerful convictions are the immediate promptings of instincts, or of the habits into which they have been modified. The humane Christian, had he been brought up in the Eskimo tradition, would with the most tender solicitude slaughter his aged parents, just as the humane Christian in the Middle Ages thought it his duty to slay heretics. There is no limit to the excesses to which men have gone on the dictates of conscience. To put actions on the basis of conscience is to put them beyond the control of reflection or the check of inquiry. It is to reduce conduct to caprice; to exalt impulse into a moral command. And the results of accepting

[1] Trotter: *Instincts of the Herd*, p. 44.

blind intuitions as rational knowledge have been in many cases catastrophic.

If reason has slain its thousands, the acceptance of instinct as evidence has slain its tens of thousands. Day by day, in the ordinary direction of their lives, men have learned during hundreds of generations how untrustworthy is the interpretation of fact which Instinct offers, and how bitter is the truth contained in such proverbs as "Anger is a bad counsellor," or "Love is blind." . . . Wars are often started and maintained, neither from mere blind anger, nor because those on either side find that they desire the results which a cool calculation of the conditions makes them regard as probable, but largely because men insist on treating their feelings as evidence of fact and refuse to believe that they can be so angry without sufficient cause.[1]

The Empiricist insists that the morality of an act cannot be told from the intensity of approval or disapproval which it arouses in the individual. Actions are not moral or immoral in themselves, but in their consequences or relations, which are only discoverable in experience. The goodness or badness of an act is measurable in terms of its consequences, and the consequences of action are discoverable only in experience. This does not imply that we calculate the results of every action before performing it, or measure the consequences of the acts of other persons before judging them. Our immediate reactions are frequently not the result of reflection at all, but are responses prompted by previously formed habits, or by instinctive caprice. These immediate intuitions are not to be relied upon as moral standards, precisely because reflection frequently comes to an estimate of an act, directly at variance with our instinctive reaction to it. We come, upon reflection, to approve acts that we are, by instinct, moved to condemn. And the reverse holds true.

When we see that a child's clothes have caught fire, we do not need to reflect on any consequences for universal well-being before we make up our minds that it is a duty to extinguish the flames, even at the cost of some risk to ourselves. It is clear that the act will

[1] Graham Wallas: *The Great Society*, pp. 224–25.

conduce to pleasure and to the avoidance of pain. We should feel an equally instinctive desire to kick out of the room a man whom we saw making incisions in the flesh of a human being if we did not know that he was a surgeon, and that the making of incisions will tend to save the man's life. Were a competent physician to suggest that the burning of the child's clothes upon its back would cure it of a fever, every reasonable person would consider it his duty to reconsider his *prima-facie* view of the situation.[1]

The Empiricist insists that moral standards are matters of discovery; that the laws of conduct must be derived from experience, just as must the laws of the physical sciences. To condemn an act as evil means that the performance of that act has in experience been found to produce harmful results. Those moral laws which at the present stage of civilized society seem to have attained universal assent, *have* attained it because they are rules whose practice has, in the history of the race, repeatedly been found to produce desirable results. Even the conception of justice, which has by so many thinkers been held to be absolute, to inhere somehow in the nature of things, is by Mill demonstrated at length to be merely a particularly highly regarded utility:

> It appears . . . that justice is a name for certain moral requirements, which, regarded collectively, stand higher in the scale of social utility, and are therefore of more paramount obligation than any others; though particular cases may occur where some other social duty is so important as to overrule any one of the general maxims of justice. Thus, to save a life, it may not only be allowable, but a duty, to steal, or take by force, the necessary food or medicine, or to kidnap, and compel to officiate, the only qualified medical practitioner.[2]

Indeed it is clear, that in the processes of natural selection those tribes would survive whose rules of morality did in general promote welfare. And it is the business of reflection, says the Empiricist, not to accept either his own conviction or those of others on ethical questions, but in cases of ambi-

[1] Rashdall: *Ethics*, pp. 51–52.
[2] Mill: *Utilitarianism* (London, 1907), p. 95.

guity to establish, after inquiry, a standard the practice of which promises the widest benefits in human happiness.

Ethics and life. All ethical theories are more or less deliberately intended as definitions of the good, and as instruments for its attainment. They must, therefore, be immediately tested by their fruits in life. An ethical theory that is only verbally concerned with the good, but does not in practice promote human welfare, is futile pedantry or worse. Reflection upon conduct arises in man's attempt to control the nature which is his inheritance in the interests of his happiness. Men have learned through experience that to follow each impulse without forethought brings them pain, misery, and sometimes destruction. They have found that to achieve happiness some harmony must be established between competing desires, and that only by balances, adjustment, and control, can they make the most of the nature which is theirs inescapably. This nature consists, as we have seen, in certain specific tendencies to action. Men are natively endowed with instincts to love, to fight, to be curious, to long for and enjoy the companionship of their fellows, to wish privacy and solitude, to follow a lead and to take it, to fear and hate, and sympathize with others. The satisfaction of any one of these impulses gives pleasure. Any one of these may become a dominant passion. But it is not through yielding to a single imperious impulse that men attain genuine happiness. To be excessively pugnacious or amorous or fearful is to court unhappiness, both for the individual and his fellows. It is only by giving each instinct its proportionate chance in the total context of all the instincts, that happiness is to be found.

It is for this reason that, as Aristotle first pointed out, a study of what is good for man must start with a study of what man himself is. The study of ethics must consequently fall back for its data upon psychology. It must note with precision the things that men can do, before it tells them what they ought to do. For the things they ought to do, are

dependent on the conditions which limit and determine their ideals. Any ethical system that deliberately excludes from its formulation natural human desires and capacities, is denying the very sources of all morality. For every ideal has its root back in some unlearned human impulse, and an ideal that has no basis in the nature of man, is not an ideal, but a negation. The ideal "way of life" is one that provides for the harmonious utilization of all those possibilities which lie in man's original nature. To deny a place to the sex impulse is to deny a place to ideal love. To deny the moral legitimacy of the fighting instinct is to take away the basis of that immense energy which goes to sustain great moral reformers. The place of ethical theory is not to deny human impulses, but to turn them to uses in which they will not hinder other impulses either of the individual or of others. Through physical science, men have sought to make the most of their physical environment; through moral science, they can try to make the most of the human equipment which is theirs for better or for worse. This human equipment is an opportunity; and the utilization of this opportunity constitutes happiness. It is in the realization of the possibilities offered by our original human nature that reflection upon morals is justified. It is in the effective fulfillment of this opportunity that its success must be measured.

Morality and human nature. A moral theory that is merely coercive and arbitrary, therefore, is not in a genuine sense moral. A morality, to justify itself, must appeal to the heart of man. The good which it recommends must be a good which man can without sophistry approve. And the good for which man can whole-heartedly strive is not determined by logic, but, in the last analysis, by biology. Human beings cannot freely call good that to which they have no spontaneous prompting. Those ascetics who have denied the flesh may have displayed a certain degree of heroism, but they displayed an equal lack of insight. For it is out of physical impulses alone that any ideal values can arise.

It is only when one instinct interferes with its neighbors, or one individual with his fellows, that instincts or activities can be called evil. They are called evil in relation, in context, with reference to their consequences. In itself no natural impulse is subject to condemnation. It is just as natural as thunder or sunshine, and is to be taken as a point of departure, as a basis for action, rather than as a chance for censure. Impulses demand control simply because, left to themselves, they collide with each other, just as individuals uncontrolled by custom, law, and education, collide with each other in the pursuit of satisfaction. The ideal is a way of life, which will allow as much spontaneity as the conditions of nature and life allow, and provide as much control as they make necessary. To be thus in control of one's desires is to be free. It is to utilize one's interests and capacities in the light of a harmony both of one's own desires, and in so far as this harmony is universal, of the desires of all men. It is to lead the Life of Reason:

> Every one leads the Life of Reason in so far as he finds a steady light behind the world's glitter, and a clear residuum of joy beneath pleasure and success. No experience not to be repented of falls without its sphere. Every solution to a doubt, in so far as it is not a new error, every practical achievement not neutralized by a second maladjustment consequent upon it, every consolation not the seed of another, greater sorrow, may be gathered together and built into this edifice. The Life of Reason is the happy marriage of two elements — impulse and ideation — which if wholly divorced would reduce man to a brute or to a maniac. The rational animal is generated by the union of these two monsters. He is constituted by ideas which have ceased to be visionary and actions which have ceased to be vain.[1]

Nor does the leading of a moral life, as Kant and other moralists said or implied, demand a stern and lugubrious countenance and a sad, resigned determination to be good. A moral system should promote rather a hallelujah than a halo. One may suspect the adequacy to human happiness of

[1] Santayana: *Reason in Common Sense*, p. 6.

those moral systems which promote in their holders or practitioners a virtuous somberness and a moral melancholy. A morality that demands such unwholesome outward evidences is inwardly not beautiful. As art is an attempt to give perfection and fulfillment to matter, so is morals an attempt to give perfect and complete fulfillment to human possibility. A genuine morality will, in consequence, be spontaneous and free. In Matthew Arnold's well-known lines:

> "Then, when the clouds are off the soul,
> When thou dost bask in Nature's eye,
> Ask, how *she* view'd thy self-control,
> Thy struggling task'd morality.
> Nature, whose free, light, cheerful air
> Oft made thee, in thy gloom, despair.
>
> . . . . . .
>
> "There is no effort on *my* brow —
> I do not strive, I do not weep.
> I rush with the swift spheres, and glow
> In joy, and when I will, I sleep." [1]

Morals, law, and education. No moral code, however adequate in its theoretical formulation or the means of its attainment, is socially effective merely as theory. No matter how completely it takes into account all the natural desires and possibilities which demand fulfillment, it remains merely an academic yearning. It becomes an instrument of happiness only when it has been made the habitual mode of life of the individual and the group, through the long continuous processes of education and law. There is a familiar discrepancy between theory and practice, even when the discrepancy is not due to insincerity. Philosophy cannot make a man virtuous, however much it may convince him of the path to virtue. Socrates thought that if men only knew the good they would follow it. But modern psychologists and ordinary laymen know better. The good must become a habitual practice if men are to follow it, and it can only become a habitual practice if education and social conditions in general

[1] From *Morality*.

provide for the early habituation of the individual to conduct that is socially useful. Aristotle, who himself framed a theory of morals that was built on the firm foundation of human possibility, was aware of the inadequacy of theory by itself to make men good:

> Some people think that men are made good by nature, others by habit, others again by teaching.
>
> Now it is clear that the gift of Nature is not in our own power, but is bestowed through some divine power upon those who are truly fortunate. It is probably true also that reason and teaching are not universally efficacious; the soul of the pupil must first have been cultivated by habit to a right spirit of pleasure and aversion, like the earth that is to nourish the seed.[1]

It is only when people find pleasure in the right actions, that they can be depended upon to perform them. And it is by their early and habitual performance that they will become pleasant. In the formation of such socially and individually useful habits, education is the incomparable instrument. The conduct of individuals is, as we have repeatedly seen, largely fixed by the customary recognition of certain acts as approved, and others as disapproved. These approvals and disapprovals are transmitted through education. Education is used here to refer not simply to the formal institutions of teaching, but to the complete social environment, the approvals and disapprovals with which an individual comes in contact. Formal education is, however, the chief means by which society inculcates into younger members those values, traditions, and customs which its controlling elements regard as of the most pivotal importance.

Social customs which are transmitted in education, become fixed in law. So that, as Aristotle points out in this same connection, laws are symptomatic of the moral values which the group regards as of the highest importance. Laws are customs given all the sanction, support, and significance that the group can put into them. Education transmits the val-

[1] Aristotle: *Ethics*, book x, chap. x, p. 344 (Weldon translation).

ues, ideals, and traditions cherished by the group, but the laws and customs already current largely control the scope and methods of education. "Education proceeds ultimately from the patterns furnished by institutions, customs, and laws. Only in a just state will these be such as to give the right education." [1]

The state of law and education which is exhibited by a society, thus accurately mirrors the degree of moral progress of the group. And what is, perhaps, more significant, the kind of law and education current determines the moral ideals and conditions the moral achievements of the maturing generation. Education, more especially, is the instrument through which the young can be educated not only to ideals and customs already current, but to their reflective modification in the light of our ever-growing knowledge of the conditions of human welfare.

[1] Dewey: *Democracy and Education*, p. 103.

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